VY Series II AWD Owner's Handbook.

AWD ADVENTRA

HOLDEN

www.holden.com.au

Holden Ltd, ABN 84 006 893 232 (hereinafter Holden).

Change of name, address or ownership

In the event of a Safety Recall, or for various reasons, Holden may need to contact you as the owner of this vehicle. Also, if less than three years old, this vehicle will qualify for Roadside Assistance, refer to Chapter 9. If you have recently changed your address, or name, or purchased this vehicle second-hand, please help us to help you by taking a few minutes to fill in and mail the form on the third page of this handbook. For information about Holden's privacy policy, please visit Holden's website at *www.holden.com.au*.

Note: Please refer to the inside front cover of the service booklet for the Vehicle Identification Certificate.

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We thank you for choosing Holden and want to assure you of our continuing interest in your driving pleasure and satisfaction.

This handbook applies to the current VY series II AWD Wagon. Therefore, due to different models and options, you may find reference in this Handbook to some equipment not fitted to your own vehicle.

Please note that all information, illustrations and specifications in this Handbook are based on the latest production information available at the time of printing. Holden reserves the right to make changes at any time without notice and without incurring any obligation.

CHANGE OF ADDRESS OR OWNERSHIP

Please fill in the form below if you have changed your name, address, bought the vehicle second-hand, or have become the new driver.

Holden requires these details in order to contact the operator in the event of a safety recall and to keep the initial 3 year Roadside Assistance details up to date (refer to Chapter 9). For information about Holden's privacy policy, please visit Holden's website at *www.holden.com.au*.

Please mail to the address on the back of this page.

If Holden Assist is fitted, please also press the Assist button on the rear view mirror to advise of change of address / ownership.

Please tick the appropriate box:

☐ Original Owner ☐ Subsequent Owner

Title: (Mr, Mrs, Miss, Ms, etc.)

First name in full or initials

Surname or Name of Company / Institution / Government Department

Address

Street / box

City / Town

State

Postcode

1st contact phone no

2nd contact phone no

Email address

Vehicle registration number

ISOVIN Number (refer to Chapter 8)

Place in an envelope and mail to:

The Manager – Warranty Administration
Service Department
Holden Ltd
Box 548D, G.P.O.
Melbourne
Victoria, 3001

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CHAPTER 1

Dashboard

The following page illustrates the dashboard, identifying and locating each function; page numbers refer to each item.

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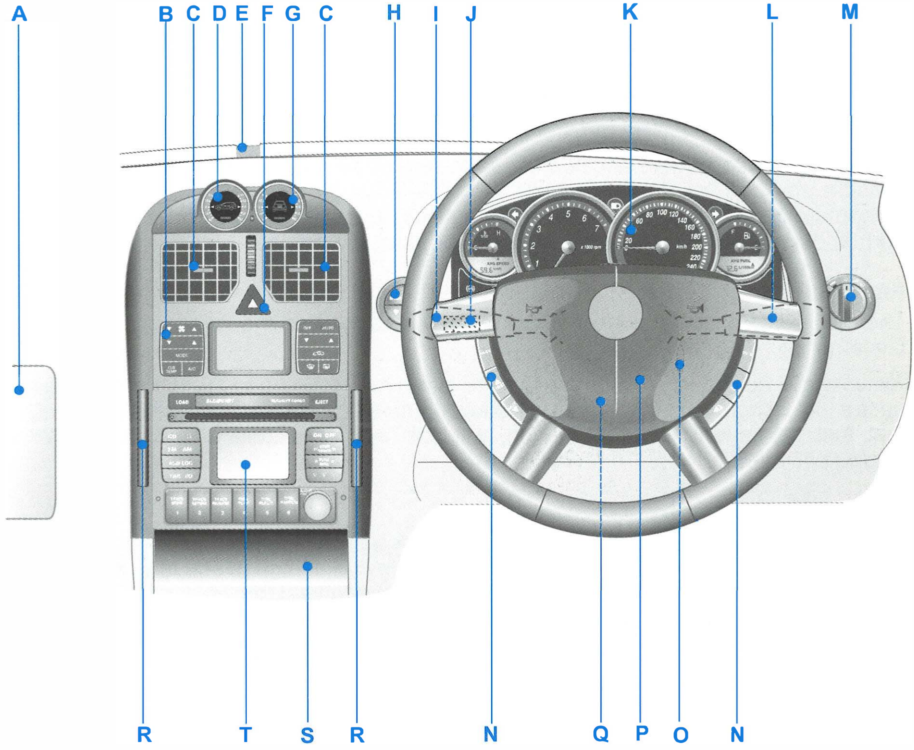
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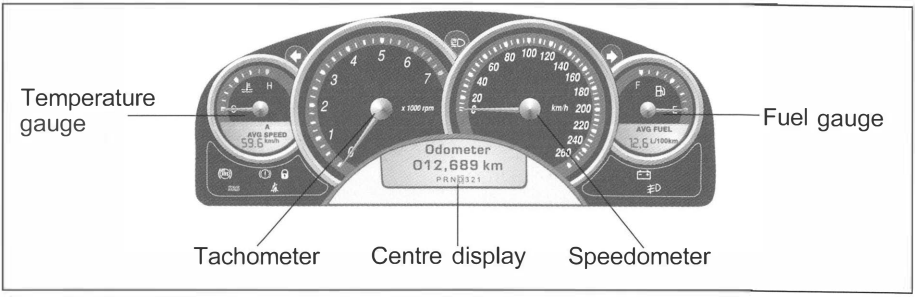
GAUGES



Speedometer

The speedometer shows vehicle speed in kilometres per hour (km/h).

Tachometer

The tachometer shows engine speed in revolutions per minute (rpm). Sustained operation in the RED zone may cause serious engine damage.

Under wide open throttle acceleration (accelerator pedal pushed flat to the floor) it is possible that the tachometer needle may briefly touch / enter the lower end of the tachometer's red zone just prior to automatically upshifting into a higher gear. This is normal during wide open throttle and will not harm the engine.

Fuel gauge

The fuel gauge shows the level of fuel in the fuel tank when the ignition is switched on.
E = empty F = full

Note: Small additions of fuel (less than 15 litres) may take up to 10 minutes to register on the fuel gauge; larger amounts will show up almost immediately. This is designed so that fuel movement, when cornering, will not register on the gauge. Also refer to Chapter 5, FUEL.

Temperature gauge

The temperature gauge indicates the engine coolant temperature when the ignition is switched on. Stop / start driving in heavy traffic, driving at high speed in warm weather, hill climbing or towing may cause the needle to move toward the 'H'. This is normal, and is not cause for concern. However, if the needle should move all the way to 'H' and remain there for more than 30 seconds, you should stop the vehicle as soon as it is safe to do so.

Also refer to ENGINE OVERHEATING in Chapter 6.

Centre display

The instrument panel centre display provides visual information to the driver for a number of vehicle functions, such as – trip computer, radio, warnings and reminders, etc. The various functions and their associated displays are explained later in this chapter and in the following chapters.

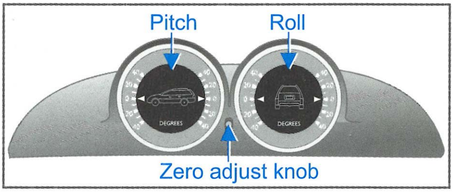
Note: Illumination of the gauges is adjusted by moving the tab on the side of the headlights dial, refer to LIGHTS further on in this chapter.

GAUGES cont.

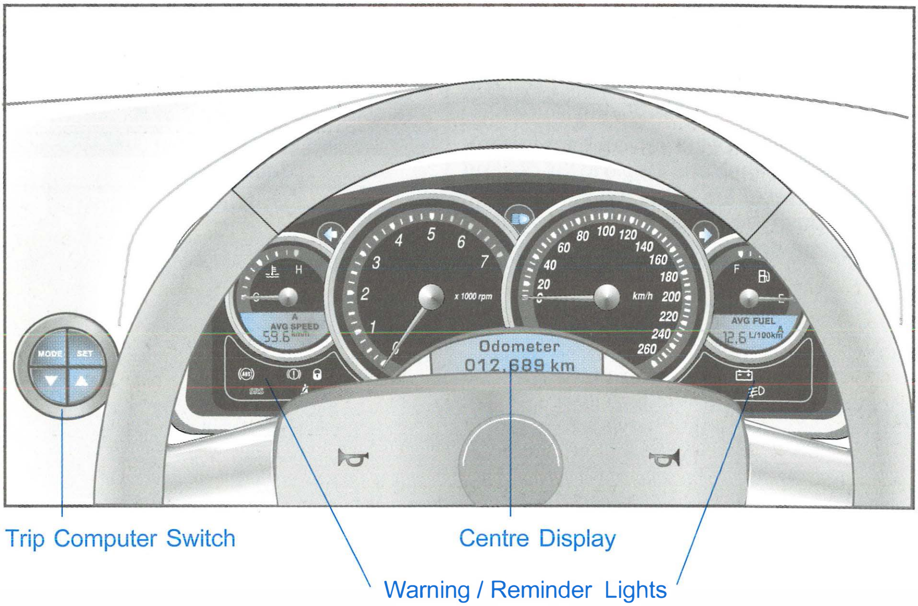
Pitch and Roll Gauges (if fitted)

The Pitch and Roll gauges on the instrument panel, above the centre air vents, provide the driver with an indication of the pitch and roll of your vehicle while driving off road.

To reset the pitch of the vehicle back to zero, pull the adjust knob and toggle to the desired setting. To reset the roll of the vehicle back to zero, push the adjust knob and toggle to the desired setting.



WARNING / REMINDER INDICATIONS


MODE
SET
▼
▲
AVG SPEED
59.6 km/h
Odometer
012,689 km
AVG FUEL
12.6 L/100km
Trip Computer Switch
Centre Display
Warning / Reminder Lights

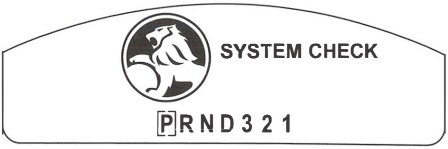
Warning / reminder indications are provided to the driver via the instrument panel as illuminated icons, animated symbols or a combination of both. The illuminated icons appear along the bottom of the instrument panel, below the Temperature and Fuel gauges. The animated symbols appear on the instrument panel centre display. Most warning / reminder indications are accompanied by a chime.

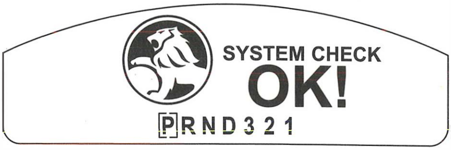
Control of the instrument panel display is provided through the trip computer switch. The switch is located left of the instrument panel.

The trip computer switch has four buttons – MODE, SET, ▼ and ▲.

Display – ignition on

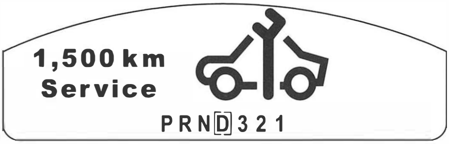
System check: When the ignition is turned on, a vehicle system check is performed and the status is shown on the display. If there are no warnings or service reminders, the display will show a series of Holden welcome screens displaying the Holden logo and finishing with the 'OK!' screen.


SYSTEM CHECK
PRND321


SYSTEM CHECK
OK!
PRND321

Note: Pressing the MODE button any time during the system check will cause the display to jump ahead to the last trip computer screen displayed on the last ignition key off. The system check will continue to run in the background.

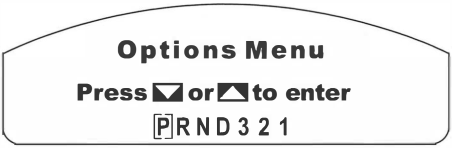
WARNING / REMINDER INDICATIONS cont.



1,500 km
Service
PRND321

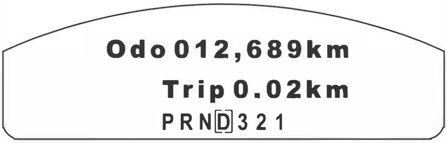
If a service reminder is active, it displays for 10 seconds or until the MODE button is pressed. Refer to the service booklet in your glovebox for details on service displays. Once the service reminder screen times-out or the MODE button is pressed, the display advances to the system check and welcome screens.

If the system check detects a problem, it displays the appropriate warning immediately. If a warning displays, press the MODE button to acknowledge it (once for each warning) and the display will jump ahead to the last trip computer screen displayed on the last ignition key off.



Options Menu
Press ▼ or ▲ to enter
PRND321

Options menu: After the 'System Check' is completed, the Options Menu displays for 3 seconds if the vehicle speed is under 10 km/h and no active warnings exist. For details on the Options Menu, refer to CUSTOMISATION MODE in this chapter.



Odo 012,689km
Trip 0.02km
PRND321

Trip display: If the MODE button is pressed or the screen times-out (3 seconds), the Options Menu disappears and the trip computer displays the same functions as when the ignition was last turned off.

Note: To display the Odometer screen, if not already displayed, tap the MODE button until the screen displays.

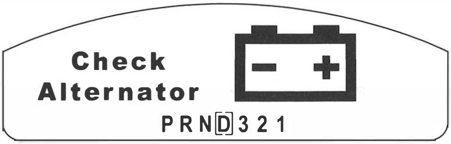
Display – ignition off

When the ignition is turned off, the Odometer displays on the screen unless a service reminder is active. Active service reminders display for 10 seconds before displaying the Odometer.

WARNINGS AND REMINDERS

The following warning and reminder indications, depending on the luxury level of your vehicle, may appear on your instrument panel centre display.

Alternator



Check
Alternator
PRND321

To check that the alternator warning light is working, the 🔋 warning light illuminates when the ignition is turned on and remains illuminated until the engine is started.

If the 🔋 warning light and 'Check Alternator' animation illuminate while driving, it indicates that the alternator is not charging properly and you should see your Holden Retailer.

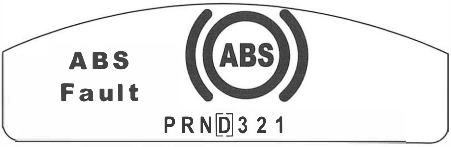
The 'Check Alternator' animation displays until the MODE button on the trip computer switch is pressed, whereas the 🔋 warning light remains illuminated until the problem is rectified.

WARNING / REMINDER INDICATIONS cont.

ABS fault / off

To check that the Anti-lock Brake System (ABS) warning light is working, the (ABS) icon displays for a short time when the ignition is turned on.

If the (ABS) warning light and 'ABS Fault' animation illuminates while driving, a malfunction of the Anti-lock Brake System is indicated and you should see your Holden Retailer. The vehicle's brake system will still operate conventionally, only the anti-lock operation is disabled, refer to Chapter 4.

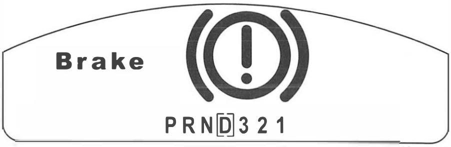


The 'ABS Fault' animation displays until the MODE button on the trip computer switch is pressed, whereas the (ABS) warning light remains illuminated until the problem is rectified.

Brake fail and park brake warning

To check that the light is working, the (!) icon displays when the ignition is first turned on and the park brake applied.

If the (!) warning light and 'Brake' animation illuminate while driving and the park brake is released, a fault with the brakes is indicated. You should immediately stop the vehicle on the side of the road as carefully as possible. Do not proceed until satisfied that braking is possible or that the cause of the problem has been fixed.



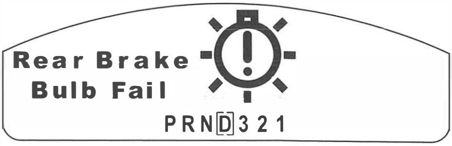
A warning chime sounds if you attempt to drive off without releasing the park brake fully.

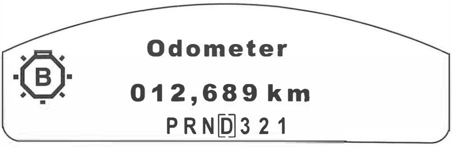
The 'Brake' animation displays until the MODE button on the trip computer switch is pressed, whereas the (!) icon remains illuminated until the problem is rectified.

Rear brake bulb failure (if fitted)

If the 'Rear Brake Bulb Fail' animation illuminates while driving, a fault in the rear brake lamps or high mounted brake lamp is indicated.

The 'Rear Brake Bulb Fail' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small bulb failure icon on the left. The icon remains until the problem is rectified.



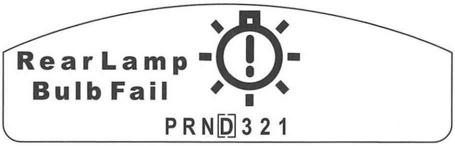


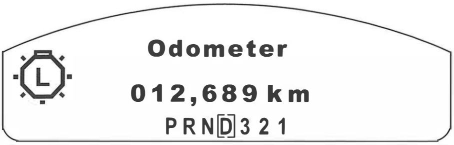
WARNING / REMINDER INDICATIONS cont.

Rear lamp bulb failure (if fitted)

If the 'Rear Lamp Bulb Fail' animation illuminates while driving, a fault in the rear park lamps or the licence plate lamps is indicated.

The 'Rear Lamp Bulb Fail' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small lamp failure icon on the left . The icon remains until the problem is rectified.

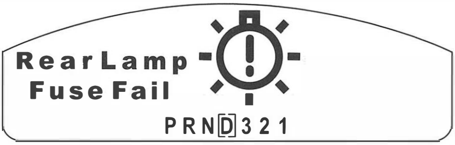


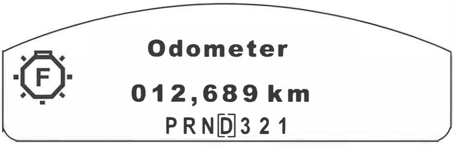


Rear lamp fuse failure (if fitted)

If the 'Rear Lamp Fuse Fail' animation illuminates while driving, a fault in the rear stop lamps fuse or park lamps fuse is indicated.

The 'Rear Lamp Fuse Fail' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small fuse failure icon on the left. The icon remains until the problem is rectified.

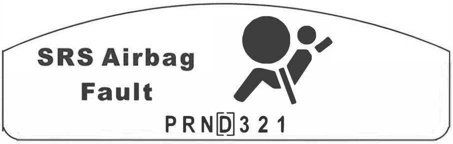




Airbag and seat belt pretensioners

To check that the warning light is working, the **SRS** icon displays for a short time when the ignition is first turned on.

If the **SRS** warning light and 'SRS Airbag Fault' animation illuminates while driving, it indicates that the airbag system or seat belt pretensioner system may not function correctly, especially in an accident. You should see your Holden Retailer immediately.



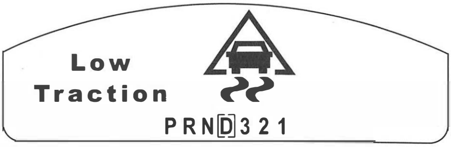
The warning light illuminates after an accident where the pretensioners, or pretensioners and airbag(s), have activated.

The 'SRS Airbag Fault' animation displays until the MODE button on the trip computer switch is pressed, whereas the **SRS** warning light remains illuminated until the problem is rectified.

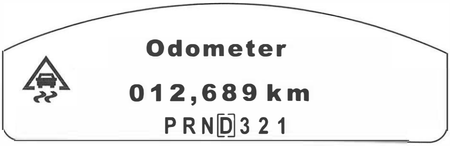
For more information, refer to Chapter 6 for airbags or Chapter 3 for seat belt pretensioners.

WARNING / REMINDER INDICATIONS cont.

Low Traction

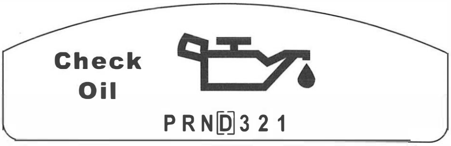


If the 'Low Traction' animation illuminates while driving, it indicates that the traction control system has sensed that your vehicle requires help with road grip and that the system is actively working to stop any wheel spin.

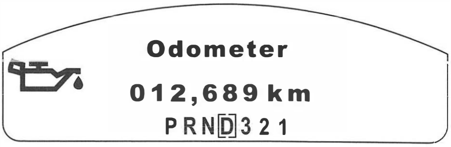


The 'Low Traction' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small low traction icon on the left. The icon remains as long as the low traction situation exists. Refer to Chapter 4 for more information on the traction control system.

Low oil pressure



If the 'Check Oil' animation illuminates while driving, it indicates that the oil pressure is low. Stop immediately, turn off the engine and check the engine oil level (refer to Chapter 7 for engine oil level checking information). Do not run the engine with this symbol illuminated. If the oil level is normal, have the system checked at your nearest Holden Retailer.



The 'Check Oil' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small oil can icon on the left. The icon remains until the problem is rectified.

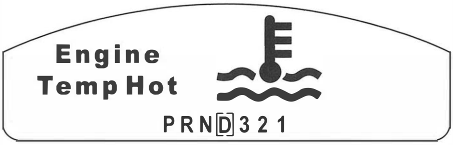
WARNING / REMINDER INDICATIONS cont.

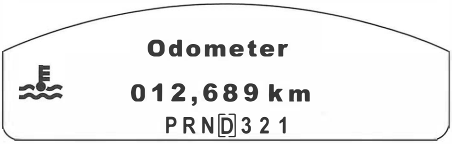
Over temperature

If the 'Engine Temp Hot' animation illuminates while driving, it indicates that the engine coolant temperature is hot. You should stop the vehicle as soon as it is safe to do so.

The 'Engine Temp Hot' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small over temperature icon on the left. The icon remains until the problem is rectified.

Refer to Chapter 6 for engine overheating instructions.

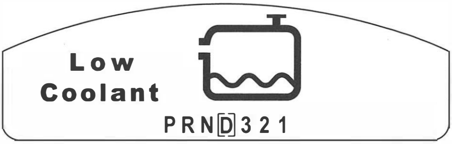


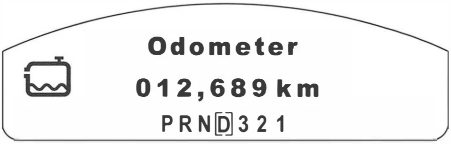


Low coolant

If the 'Low Coolant' animation illuminates while driving, it indicates that the engine coolant level is dangerously low. You should check the level as soon as possible, refer to Chapter 7 for engine coolant level check instructions.

The 'Low Coolant' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small low coolant icon on the left. The icon remains until the problem is rectified.

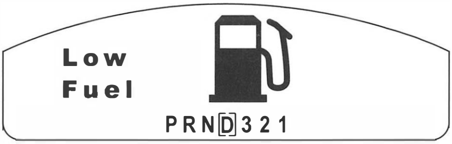


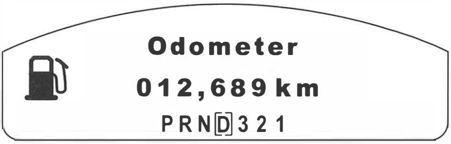


Low fuel

If the 'Low Fuel' animation illuminates while driving, it indicates that the fuel level is low.

The 'Low Fuel' animation displays until the MODE button on the trip computer switch is pressed. The trip computer then displays its calculation of kilometres to empty for 10 seconds before reverting to the original trip computer display with a small low fuel icon on the left. The icon remains until the fuel tank is filled above the low fuel level.



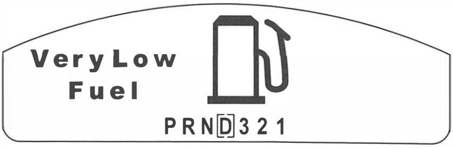


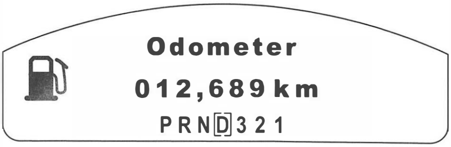
WARNING / REMINDER INDICATIONS cont.

Very low fuel

If the 'Very Low Fuel' animation illuminates while driving, it indicates that the fuel level is very low.

The 'Very Low Fuel' animation displays until the MODE button on the trip computer switch is pressed. The trip computer then displays its calculation of kilometres to empty for 10 seconds before reverting to the original trip computer display with a small flashing low fuel icon on the left. The icon remains until the fuel tank is filled above the very low fuel level.

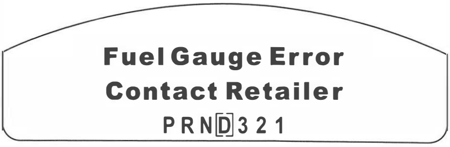


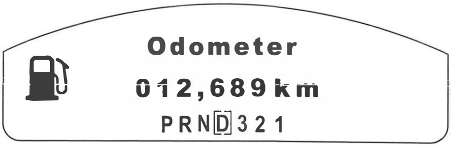


Fuel gauge error

If the 'Fuel Gauge Error Contact Retailer' animation illuminates while driving, a fault in the fuel level measurement system is indicated. You should contact your Holden Retailer as soon as possible.

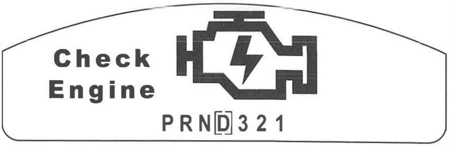
The 'Fuel Gauge Error' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small fuel bowser icon on the left. The icon remains until the problem is rectified.



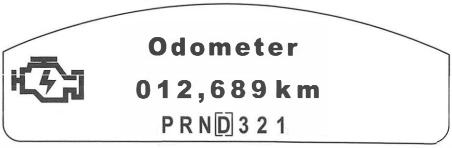


Check engine

If the 'Check Engine' animation illuminates while driving, it indicates a fault in the electronic engine management system or the automatic transmission. Although the vehicle may still be driveable, it is recommended that you reduce driving speed, do not tow heavy loads or heavily load the vehicle. You should have the problem fixed as soon as possible. Only your Holden Retailer has the correct diagnostic computer equipment and training to find and fix the problem.



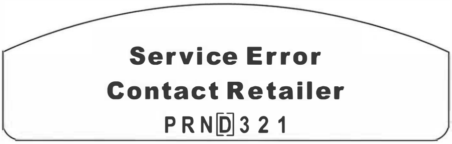
The 'Check Engine' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small engine icon on the left. The icon remains until the problem is rectified.



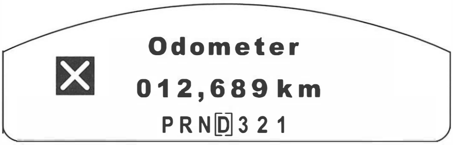
WARNING / REMINDER INDICATIONS cont.

Service error

If the 'Service Error Contact Retailer' animation illuminates while driving, a fault in the instrument panel is indicated. You should contact your Holden Retailer as soon as possible.



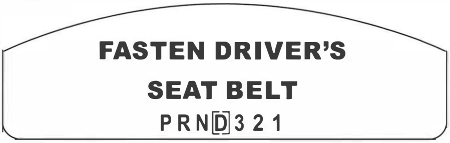
The 'Service Error' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small **X** icon on the left. The icon remains illuminated until the problem is rectified.



Seat belt

The seat belt warning light is designed to remind the vehicle occupants to fasten their seat belts. To check that the seat belt warning light is working, the 💺 warning light displays for approximately 8 seconds when the ignition is first switched on. The 💺 warning light remains illuminated until the driver's seat belt has been fastened securely. If the driver's seat belt is not fastened within a certain time and / or distance the 💺 warning light flashes and a chime sounds.

A 'Fasten Driver's Seat Belt' warning message displays and another chime sounds if the driver's seat belt is still not fastened when the vehicle speed reaches or exceeds 25 km/h.

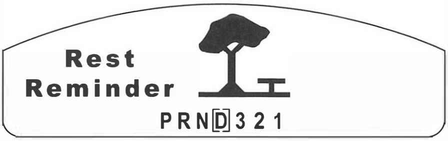


Note: The warning message reverts to the original trip computer display when the vehicle speed drops below 25 km/h, whereas the 💺 warning light clears once the driver's seat belt is fastened securely. If the driver's seat belt is unfastened while the ignition is on, the warning light and chime sequence will start over.

Rest reminder

This feature reminds the driver that they may have been travelling for too long without a break.

The rest reminder appears only after all warning displays, system check displays and options menu selections have been completed.



When the ignition is switched on, a timer starts counting. After 2 hours of continuous driving, the trip computer switches over to the trip time on the side and the centre displays the rest icon on triple-window clusters. The wording remains stationary but the icon flashes to alert the driver of the rest reminder.

When the MODE button on the trip computer switch is pressed the display reverts back to the previously displayed trip computer screen.

The large icon reappears after a further 20 minutes, accompanied by a chime, unless the ignition has been turned off.

WARNING / REMINDER INDICATIONS cont.

Fog lights (if fitted)

The icon illuminates when the fog lights are working. Refer further on in this chapter for information on the operation of the fog lights.

Security

The 🔒 warning light flashes when the vehicle immobiliser and security system is activated.

Turn signals

The appropriate arrow flashes when the lever on the right side of the steering column is moved up or down with the ignition turned to on.

- Both arrows flash when the hazard warning flasher is switched on, refer further on in this chapter for information on the Hazard Warning Flasher.
- The indicators flash at a quicker rate if a globe has blown.

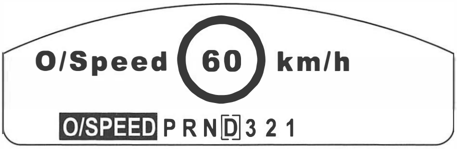
High beam

The icon illuminates when the headlight high beams are in use.

WARNING / REMINDER INDICATIONS cont.

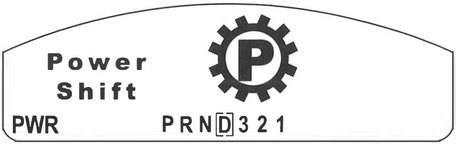
Overspeed

Overspeed is designed to warn the driver when he or she has exceeded the pre-selected speed. For information on the overspeed displays, refer to TRIP COMPUTER further on in this chapter.


O/Speed
60
km/h
O/SPEED
P R N D 3 2 1

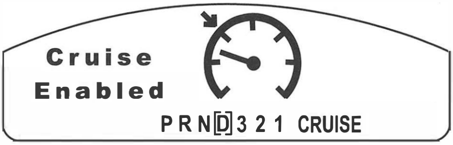
Power shift

The 'Power Shift' animated symbol and PWR icon displays when the transmission is operating in the power mode. For information on the automatic transmission displays, refer to Chapter 4.


Power
Shift
P
PWR
P R N D 3 2 1

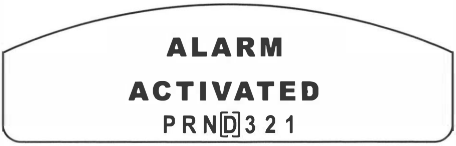
Cruise control

The 'Cruise Enabled' animated symbol and CRUISE icon displays when the cruise control is activated and ready for use. For information on the cruise control displays, refer to CRUISE CONTROL further on in this chapter.


Cruise
Enabled
P R N D 3 2 1
CRUISE

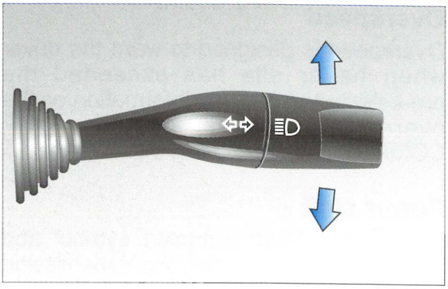
Alarm (if fitted)

The alarm is triggered when any of the doors, bonnet or tailgate are opened or a hot-wire is attempted. For information on the alarm displays, refer to Chapter 2.


ALARM
ACTIVATED
P R N D 3 2 1

TURN SIGNALS, HORN, TILT / REACH STEERING

Turn signals

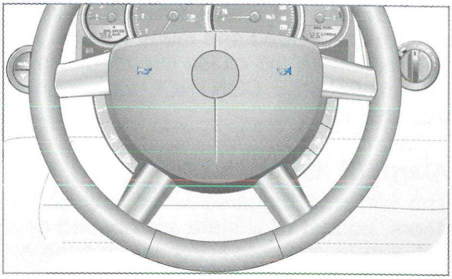


The turn signals lever is on the right side of the steering column. Push the lever up to signal a left turn, down to signal a right turn.

In some turns (such as changing lanes) the steering wheel is not turned far enough to cancel the turn signal. So, to indicate a lane change, move the lever part way and hold. The lever returns to the neutral position when you release it.

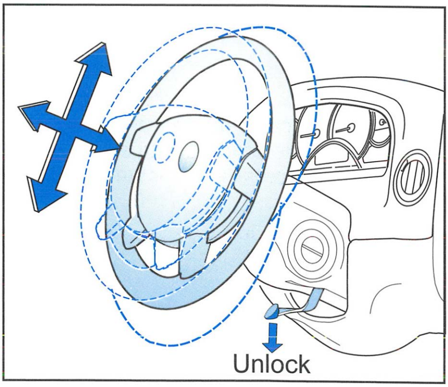
An arrow on the instrument panel flashes when the lights are in operation.

Horn



The horn is activated by pressing the horn symbol, on either side of the steering wheel centre pad.

Tilt / reach steering



Move the lock lever under the steering column down.

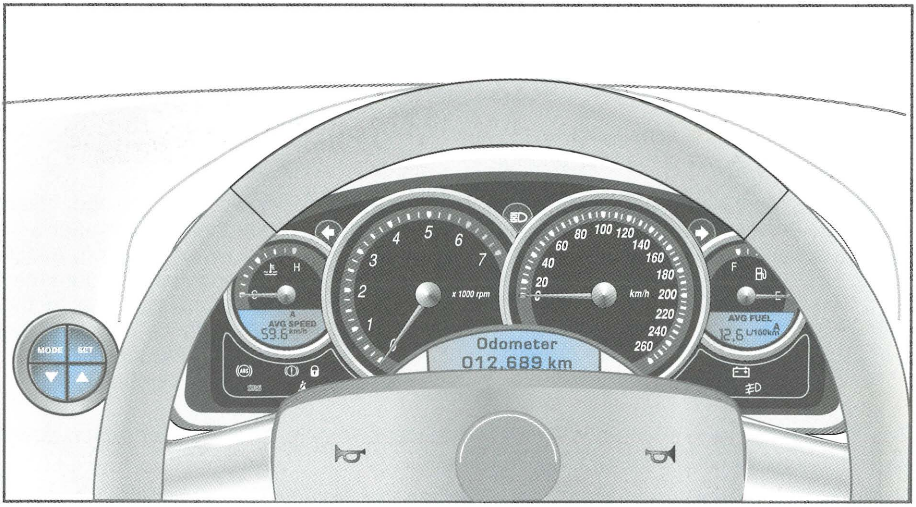
Grasp the steering wheel and move as required. It can be moved up or down, pulled towards you or pushed away from you.

When in the preferred position, move the lock lever up. 'Jiggle' the steering wheel to ensure it has locked securely before driving.

WARNING:

As with all the other driver position controls, do not attempt to adjust the steering wheel while driving.

TRIP COMPUTER



The buttons for the trip computer are located to the left of the gauges. The triple-windows for the trip computer are located directly beneath the gauges.

Tap the MODE button to scroll between the different sets of displays.

You will notice that speed related displays are in the left window, distance related displays in the centre and fuel related displays on the right.

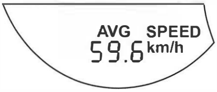
When the ignition is turned on, the trip computer displays the same functions as when the ignition was last turned off.

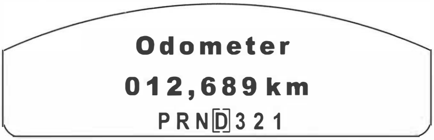
The trip computer can be reset when AVG SPEED or TRIP TIME are shown on the left window. To reset the trip computer, press the SET button for less than 2 seconds. Resetting does not affect the Odometer, Overspeed, Distance to Empty, Time to Arrival, Distance to Arrival, Instantaneous Fuel or Remaining Fuel values.

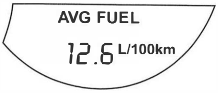
Note:

- Personal customising is provided in the trip computer for the owner. Customisable functions and features, for example ones that can be turned on and off or can be adjusted, are marked with an asterisk (*). Customising details, as well as additional operating notes, are shown further on in this chapter, refer to CUSTOMISATION MODE.
- If the wrong buttons are accidentally pressed causing the window to show a display other than normal, turn the ignition off then on again (only when the vehicle is stationary).

TRIP COMPUTER cont.







Average speed

Shows the average speed (while the engine is running) since the trip computer was reset.

Odometer

Records kilometres travelled since the vehicle was built.

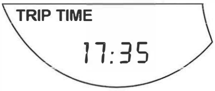
Average fuel

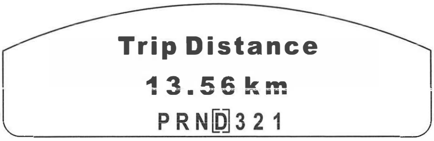
Shows average fuel used since the trip computer was reset. After resetting, a high fuel consumption figure may appear initially, due to the short distance travelled and the large amount of fuel used when accelerating.

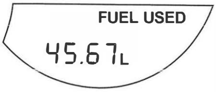
To reset the Average speed and Average fuel displays only, hold the SET button down for 8 seconds while this set of functions displays.

Note: To reset the Average speed and Average fuel displays along with the Trip time / Trip distance / Fuel used set of displays, press the SET button for less than 2 seconds while this set of functions displays.

TAP MODE BUTTON







*Trip time

Shows the 'engine running' time since the trip computer was reset. If this exceeds 99 hours and 59 minutes, the trip time is displayed in hours only.

*Trip distance

Shows the kilometres travelled from the start of a particular trip.

*Fuel used

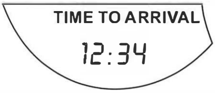
Shows the total litres of fuel used since the trip computer was reset.

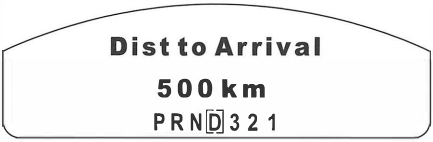
To reset the Trip distance to zero, hold the SET button down for 8 seconds while this set of functions displays.

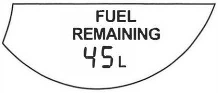
Note: To reset the Trip time / Trip distance / Fuel used set of displays along with the Average speed and Average fuel functions, press the SET button for less than 2 seconds while this set of functions displays.

TAP MODE BUTTON

TRIP COMPUTER cont.







*Time to arrival

Shows trip time to arrival in hours and minutes based on Distance to arrival. If this exceeds 99 hours and 59 minutes, the time to arrival is displayed in hours only.

*Distance to arrival

At the start of a trip estimate your distance to arrival (from maps, road signs etc.). Tap the ▼ or ▲ button until the display shows your estimated trip distance. When you drive off, the computer constantly updates your time to arrival, based on changing driving speeds. You can use the ▼ or ▲ button to adjust the kilometres any time this display is shown.

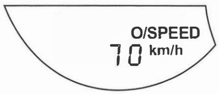
*Remaining fuel

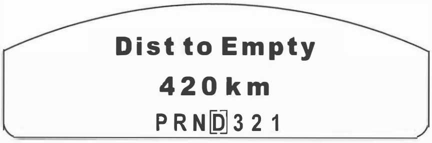
Shows the litres of fuel left in the fuel tank, calculated to the nearest 5 litres.

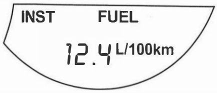
When fuel level is down to approximately 8 litres, 'LO' is displayed instead of litres.

TAP MODE BUTTON

TRIP COMPUTER cont.







Overspeed

The overspeed sets the speed you do not want to exceed. For example, if driving in a 60 km/h zone, set overspeed to 60, by tapping the ▼ or ▲ button. When vehicle speed exceeds 60 km/h, the overspeed animated warning message displays in the instrument panel centre display and an audible chime warns you that you are speeding. At that time, the trip computer automatically shows the overspeed display, allowing you to make adjustments if required.

Distance to empty

An estimate of how far your vehicle will travel on the current amount of fuel. It is based on your previous fuel usage and is frequently updated. Therefore, as conditions become suited to more economical driving the Distance to empty may actually increase, for example from city to highway driving.

In addition, movement of fuel in the tank can cause the reading to fluctuate when the fuel level is low.

Instantaneous fuel

Shows instantaneous fuel usage in litres per 100 km when driving. When speed drops below 10 km/h the usage is shown in litres per hour.

If the overspeed is maintained for longer than 10 seconds but it is less than 15 km/h over the set overspeed value, the overspeed reverts to the original trip computer display with a small O/SPEED icon on the left.

If the overspeed is maintained for longer than 10 seconds and is more than 15 km/h over the set overspeed value, the overspeed warning reverts to a flashing O/SPEED icon.

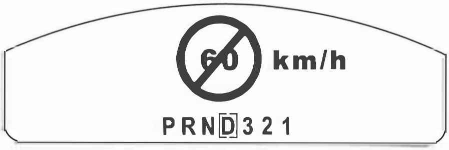
Overspeed is adjustable in 5 km/h units and works at speeds between 20 km/h and 200 km/h. Tap the ▼ or ▲ button as required or hold a button to scroll quickly to a speed. Briefly press the SET button to set the overspeed to the speed at which the vehicle is currently travelling.

Press and hold the SET button for at least 2 seconds (when this display is showing) to turn the overspeed warning on or off.

Overspeed presets can also be chosen, refer to Overspeed presets on the next page.

*Underspeed chime

Overspeed provides a chime when your travelling speed exceeds the overspeed chosen value, whereas underspeed provides a chime to indicate when your travelling speed again drops below the overspeed value.



TRIP COMPUTER cont.

Overspeed presets

Instead of adjusting overspeed up and down in 5 km increments (see previous page), you can set four commonly used speeds, e.g. 60, 80, 100 and 110 km/h.

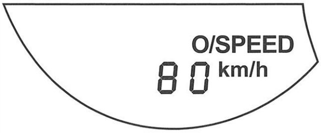
Hold down the MODE button for 2 seconds when the overspeed display is shown. The display changes from normal overspeed to overspeed preset.

P1 is the first preset number, with a default setting of 60 km/h.

Tap the ▲ button to see the second preset, P2, which has a default setting of 80 km/h, P3 has a default setting of 100 km/h and P4 of 110 km/h. Tap the ▼ or ▲ button to move between the preset numbers.

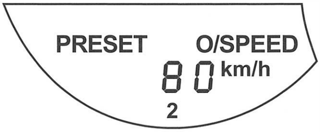
The overspeed preset display has now replaced the normal overspeed display in your set of displays. Tap the MODE button to scroll through the other displays.

To change the display back to normal overspeed, hold down the MODE button for 2 seconds while the overspeed preset display is shown.



Normal overspeed

Hold MODE button for 2 seconds



Overspeed preset

Altering overspeed presets

Note: To change the overspeed presets, the vehicle must be stationary.

The default settings of 60, 80, 100 and 110 km/h can be changed for your individual preference.

The vehicle must be stationary when changing overspeed presets. To alter, ensure the preset you wish to change is showing, e.g. P2 80 km/h. Then, briefly press the SET button. The display starts to flash. Use the ▼ or ▲ button to adjust the setting. When correct, briefly press the SET button. Each preset can be changed in this way.

The presets are automatically arranged in ascending order.

One or more presets can be assigned to 'off' by reducing the preset down to '0' (off). When driving, you will then only have three or less presets to choose from. To turn back on, select the 'off' preset (when the vehicle is stationary) and use the ▲ button to increase the number.

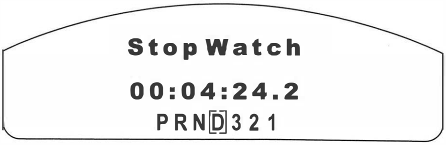
Overspeed presets must be altered when the vehicle is stationary. If the ▼ and ▲ buttons are briefly pressed while driving, the overspeed setting is changed to the speed at which you are travelling (in multiples of 5 km/h).

If the SET button is pressed for 2 seconds, either while driving or stationary, overspeed is turned completely off or on.

TRIP COMPUTER

TAP MODE BUTTON

*Stop watch



The stop watch function, when enabled, records elapsed time. It can be used, for example, to measure the time taken to travel between two points on a trip. To start / stop the stop watch, press the SET button. To reset the stop watch, press and hold the MODE button for more than 3 seconds, a confirmation beep should be heard.

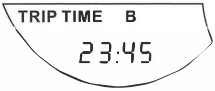
Additional functions

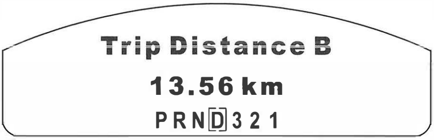
The more commonly used functions of the trip computer are shown on the previous pages. The following information is provided about the additional, more complex Trip function that have been provided in the trip computer for the owner. This additional function can be enabled in Customisation Mode, refer to CUSTOMISATION MODE further on in this chapter.

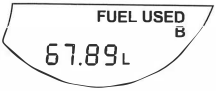
When the displays are enabled, press the MODE button to scroll through all the trip computer displays. There are now two Trip time / Trip distance / Fuel used displays (Trip A and Trip B) . Customisation Mode can be used to disable the displays, if required.

*Trip A/B

When the Time to arrival / Distance to arrival / Fuel remaining set of windows are turned on (using the Customisation Mode) and are showing on the display, hold the MODE button down for 2 seconds. Now, instead of the Time to arrival set of displays, the trip computer shows Trip B details.







Press the MODE button to view the displays. There are now two different sets of trip displays counting, the original set of trip displays (labelled 'A' while 'B' is turned on) and a new set of trip displays, labelled 'B'. This is useful on a long trip, as Trip B can be reset at the beginning of the journey and then locked away (by pressing the MODE button for 2 seconds when 'Trip B' is shown). Time to arrival / Distance to arrival / Remaining fuel will again be shown on the display, but Trip B is still counting away in the background and the original trip display can be used for short distances during the journey. Trip B can be viewed at any time by pressing the MODE button for 2 seconds when Distance to arrival is shown.

Note:

- Trip A / B can also be enabled / disabled in Customisation Mode, refer to CUSTOMISATION MODE further on in this chapter.
- If the Trip A and B function is selected, the Average speed and Average fuel displays indicate Trip A.

TRIP COMPUTER

Service due

A service reminder message is built into the trip computer.

The reminder message first appears 1000 km before the service is actually due, giving you time to arrange for the service to be carried out. The message is shown on the trip computer for 10 seconds whenever the vehicle's ignition is switched on or off, until the trip computer is reset. When the service is overdue the message flashes for 10 seconds when the ignition is turned on or off (for further information on servicing, refer to the service booklet in your glovebox).

Note: This message is calculated only by distance. Remember that if you are driving infrequently, special servicing may be required, refer to 'Additional service requirements' in the service booklet in your glovebox.

The Service due message will be reset for you by your Holden Retailer when you take your vehicle there to be serviced.

Trip computer notes:

- If the wrong buttons are accidentally pressed, causing the window to show a display other than normal, turn the ignition off then on again when the vehicle is stationary.
- Several animated warning lights are linked to the instrument panel display windows. Refer to WARNING / REMINDER INDICATIONS previously in this chapter.
- When the overspeed warning symbol is first shown, the overspeed trip computer display is automatically shown for 10 seconds. This is to show what your pre-selected speed is and allow you to adjust it if required. After 10 seconds, the trip computer returns to its previous display.
- Some displays change the units of measurement over time. For example, the Time to arrival shows hours only above 99 hours and 59 minutes, and hours and minutes below. Time to arrival also shows 10 minute units above 2 hours, 5 minute units below 2 hours and 1 minute units below 10 minutes.
- Higher luxury level vehicles have a personal identity key system (fully explained in Chapter 2) which remembers different settings used by different keys. If your vehicle is fitted with this system, the trip computer remembers your last selected settings. When the ignition is turned on with your key, your last set of displays and overspeed settings are shown.

X If this symbol or a Service error message is shown in the display, it indicates a fault in the trip computer / instrument panel and you should see your Holden Retailer.

CUSTOMISATION MODE

Customisation Mode enables the driver to customise some of the vehicle features using the trip computer switch and instrument panel centre display.

Note: Only features that are fitted to the vehicle will be displayed.

Entering customisation mode

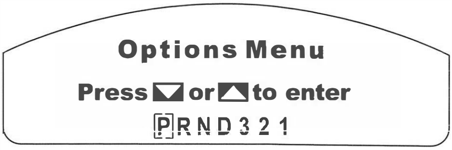
Customisation Mode is accessible via the Options Menu, which can be displayed when the vehicle is stationary or moving slowly. To access the Options Menu:

- When the vehicle is stationary, hold down the MODE button while turning the ignition from off to on.
- When the vehicle has been started, the system check completed and the vehicle speed is less than 10 km/h, then the Options Menu displays for 3 seconds.

Note:

- If the vehicle speed exceeds 10 km/h, the Options Menu disappears and the display reverts back to the previous trip computer function.
- Customisation Mode is not accessible if an alarm warning has been activated or a warning symbol on the instrument panel has been triggered.

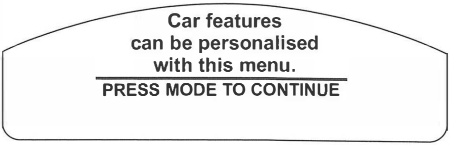
With the Options Menu displayed, use the trip computer ▼ or ▲ button to enter Customisation Mode.



Options Menu

Press ▼ or ▲ to enter

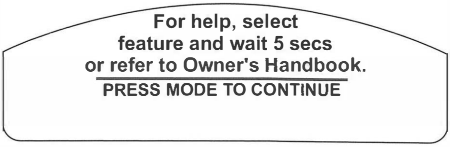
PRND321



**Car features
can be personalised
with this menu.**

PRESS MODE TO CONTINUE

Help screens: In Customisation Mode there are help screens to assist the driver to understand the feature he or she is adjusting. If a menu item is selected and the screen is left for more than 5 seconds, a help screen pops up to inform the driver how to operate the selected feature.



**For help, select
feature and wait 5 secs
or refer to Owner's Handbook.**

PRESS MODE TO CONTINUE

Navigating the menu:

- To scroll through the different customisation features, press the MODE button.
- To change the setting, use the ▼ and ▲ buttons.
- To continue, press the MODE button.
- To exit Customisation Mode:
  - press the MODE button to scroll through to the exit screen,
  - drive the vehicle at more than 10 km/h, or
  - switch the ignition off (only if stationary).

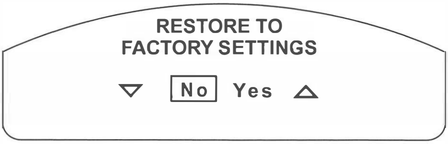
CUSTOMISATION MODE cont.

Options

Once in Customisation Mode, the driver can step through the following series of options:

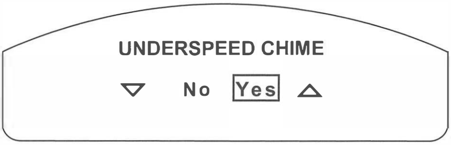
RESTORE TO FACTORY SETTINGS

This option restores the instrument panel, entertainment system and other general vehicle systems to the factory default settings. Use the ▼ or ▲ button to select 'Yes' or 'No'. Press the MODE button to continue. If 'Yes' is selected, the next feature displays after a 2 second delay. This delay allows time for the default parameters to be set.



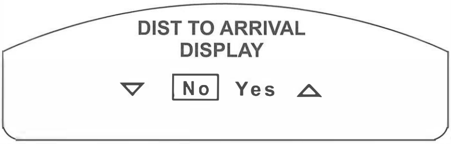
UNDERSPEED CHIME

This option is used to enable / disable the underspeed chime. Overspeed provides a chime when your travelling speed exceeds the overspeed chosen value, whereas underspeed provides an additional chime to indicate when your travelling speed again drops below the overspeed. Use the ▼ or ▲ button to select 'Yes' or 'No'. If 'Yes' is selected, the underspeed chime is activated (Default = Yes). Press the MODE button to continue.



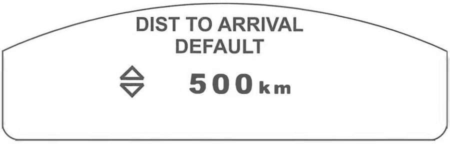
DIST TO ARRIVAL DISPLAY

This option is used to enable / disable the Time to arrival / Distance to arrival / Remaining fuel set of displays. This set of displays is explained previously in this chapter. Use the ▼ or ▲ button to select 'Yes' or 'No'. If 'Yes' is selected, the Time to arrival / Distance to arrival / Remaining fuel set of displays is activated (Default = Yes). Press the MODE button to continue.



DIST TO ARRIVAL DEFAULT

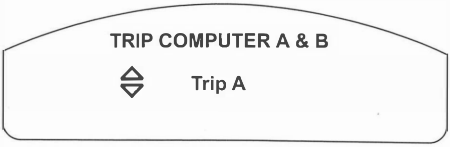
The Distance to arrival can be reset (when not in customisation mode) by pressing the SET button for less than 2 seconds. The distance resets to 500 km, which is the default setting. When in customisation mode, the default setting can be altered up or down with the ▼ or ▲ buttons. When correct, press the MODE button to continue.



CUSTOMISATION MODE cont.

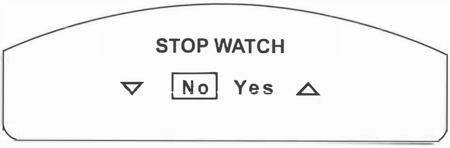
TRIP COMPUTER A & B

This option is used to select either one or two Trip time / Trip distance / Fuel used set of displays. This set of displays is explained previously in this chapter. Use the ▼ or ▲ button to select 'Trip A' or 'Trip A & B' (Default = Trip A). Press the MODE button to continue.



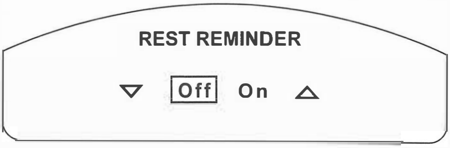
STOP WATCH

This option is used to enable / disable the stop watch display. This display is explained previously in this chapter. Use the ▼ or ▲ button to select 'Yes' or 'No'. If 'Yes' is selected, the stop watch display is activated (Default = Yes). Press the MODE button to continue.



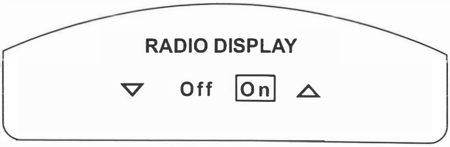
REST REMINDER DISPLAY

This option is used to enable or disable the Rest Reminder display on the instrument panel. This display is explained previously in this chapter. Use the ▼ or ▲ button to select 'On' or 'Off'. If 'On' is selected, the Rest Reminder display is activated (Default = Off). Press the MODE button to continue.



RADIO DISPLAY

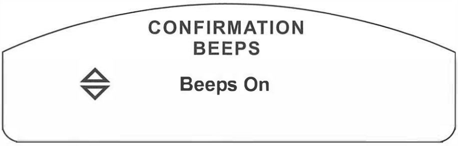
This option is used to enable / disable the entertainment system display on the instrument panel. Detailed information on the operation of the radio and CD is provided in the Audio System Handbook located in the glovebox. Use the ▼ or ▲ button to select 'On' or 'Off'. If 'On' is selected, the Radio display is activated (Default = On). Press the MODE button to continue.



CUSTOMISATION MODE cont.

CONFIRMATION BEEPS

This option is used to enable / disable the audio system confirmation beeps function. This function is explained further in the Audio System Handbook located in the glovebox. Use the ▼ or ▲ button to select 'Beeps On', 'CD Load & Eject Only' or 'Beeps Off'. If 'On' is selected, the audio system confirmation beeps function is activated (Default = On). Press the MODE button to continue.

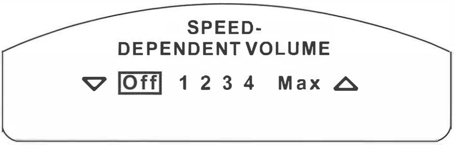


CONFIRMATION BEEPS

⇕ Beeps On

SPEED DEPENDENT VOLUME

This option is used to enable / disable the audio system speed dependent volume function. This function is explained further in the Audio System Handbook located in the glovebox. Use the ▼ or ▲ button to adjust the setting to Off, 1, 2, 3, 4 or Max (Default = 2). Press the MODE button to continue.

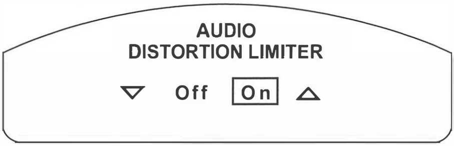


SPEED-DEPENDENT VOLUME

▽ Off 1 2 3 4 Max △

AUDIO DISTORTION LIMITER

This option is used to enable / disable the audio system distortion limiting function. This function is explained further in the Audio System Handbook located in the glovebox. Use the ▼ or ▲ button to select 'On' or 'Off'. If 'On' is selected, the audio distortion limiting function is activated (Default = On). Press the MODE button to continue.

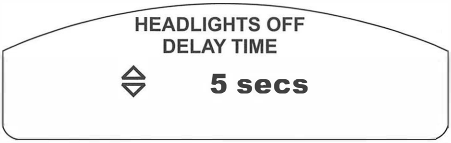


AUDIO DISTORTION LIMITER

▽ Off On △

HEADLIGHTS OFF DELAY TIME

This option is used to adjust the headlights off time delay. This function is explained further on in this chapter. Use the ▼ or ▲ button to adjust the delay setting between zero and 180 seconds (Default = 1 second). Press the MODE button to continue.

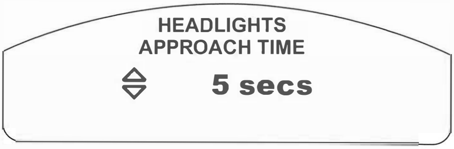


HEADLIGHTS OFF DELAY TIME

⇕ 5 secs

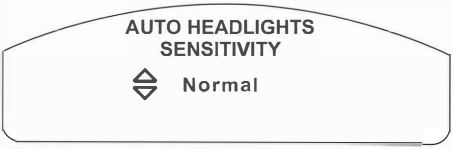
CUSTOMISATION MODE cont.

HEADLIGHTS APPROACH TIME



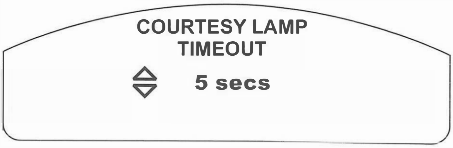
This option is used to adjust the headlights approach illumination time delay. This function is explained further on in this chapter. Use the ▼ or ▲ button to adjust the delay setting between zero and 90 seconds (Default = 30 seconds). Press the MODE button to continue.

AUTO HEADLIGHTS SENSITIVITY



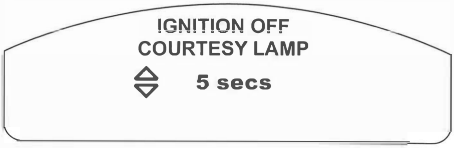
This option is used to adjust the automatic headlights on sensitivity. This function is explained further on in this chapter. Use the ▼ or ▲ button to adjust the sensitivity setting to 'Early', 'Normal' or 'Late' (Default = Normal). Press the MODE button to continue.

COURTESY LAMP TIMEOUT



This option is used to adjust the length of time that the interior courtesy lamp remains illuminated after opening a door or unlocking (at night only) the vehicle. Use the ▼ or ▲ button to adjust the time setting between zero and 255 seconds (Default = 30 seconds). Press the MODE button to continue.

IGNITION OFF COURTESY LAMP

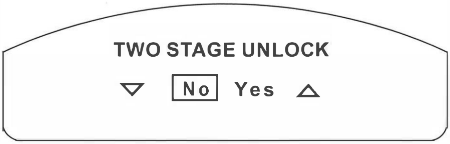


This option is used to adjust the length of time that the interior courtesy lamp remains illuminated after the ignition is turned off (at night only). Use the ▼ or ▲ button to adjust the time setting between zero and 255 seconds (Default = 30 seconds). Press the MODE button to continue.

CUSTOMISATION MODE cont.

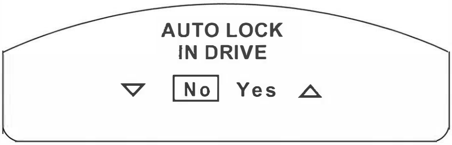
TWO STAGE UNLOCK

This option is used to enable / disable the two stage door unlock function. This function is explained in detail in Chapter 2. Use the ▼ or ▲ button to select 'Yes' or 'No'. If 'Yes' is selected, the Two Stage Unlock function is activated (Default = Yes). Press the MODE button to continue.



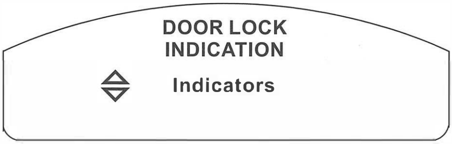
AUTO LOCK IN DRIVE

This option is used to enable / disable the automatic door locking when in Drive function. This function is explained in detail in Chapter 2. Use the ▼ or ▲ button to select 'Yes' or 'No'. If 'Yes' is selected, the Auto Lock In Drive function is activated (Default = No). Press the MODE button to continue.



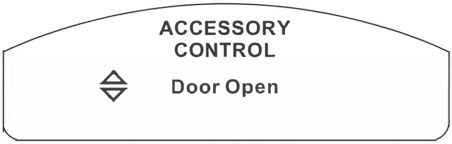
DOOR LOCK INDICATION

This option is used to select the type of indication provided to the driver upon locking and unlocking the vehicle's doors. This function is explained in detail in Chapter 2. Use the ▼ or ▲ button to select 'Indicators' or 'Indicators & Horn' (Default = Indicators). Press the MODE button to continue.



ACCESSORY CONTROL

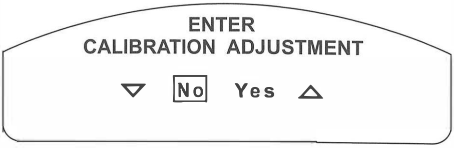
This option is used to enable / disable the accessories timeout function. This function is explained in detail in Chapter 3. Use the ▼ or ▲ button to select 'Off' or 'Door Open' (Default = Door Open). Press the MODE button to continue.



CUSTOMISATION MODE cont.

ENTER CALIBRATION ADJUSTMENT

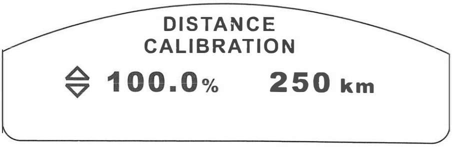
This option is used to calibrate the trip computer distance and fuel figures. The trip computer uses in its calculations different calibration numbers. These figures are pre-set for the standard vehicle and do not have to be adjusted. However, each vehicle does vary due to tyre size, tolerances etc. and therefore, the facility is provided to adjust each figure for greater accuracy.



Use the ▼ or ▲ button to select 'Yes' or 'No'. If 'Yes' is selected, the trip computer enters into calibration mode, Distance Calibration adjustment. If 'No' is selected, the menu advances to the EXIT OPTIONS MENU. Press the MODE button to continue.

DISTANCE CALIBRATION

If Distance Calibration is not required, press the MODE button to advance to Fuel Calibration.



If you wish to check / adjust the Distance Calibration, BEFORE ENTERING CUSTOMISATION MODE:

1. Line the vehicle's front wheels against a highway kilometre shield post.
2. Press the MODE button to display the Trip Distance screen.
3. Press the SET button for less than 2 seconds when Trip Distance is showing (to zero the Trip Distance).
4. Drive off to another shield post (between 10 km and 500 km) and stop with the front wheels lined up again.
5. Note the real distance between the shield posts and the distance on the Trip Distance display.
6. If different, enter Customisation Mode and access the Distance Calibration option. The Trip Distance is shown in the centre display. Press the ▼ or ▲ button to adjust the centre display to show the real distance indicated by the shield posts.
7. Press the MODE button to continue to Fuel Calibration.

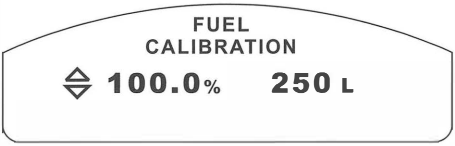
Note:

- The distance calibration % automatically adjusts as the trip distance is adjusted. The default distance calibration is 100.0%. The maximum it can be adjusted to is 120.0%, the minimum is 80%.
- Altering the distance calibration does not affect the odometer.

CUSTOMISATION MODE cont.

FUEL CALIBRATION

If Fuel Calibration is not required, press the MODE button to advance to the EXIT OPTIONS MENU.



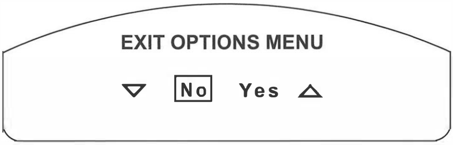
If you wish to check / adjust the Fuel Calibration, work out the following BEFORE ENTERING CUSTOMISATION MODE:

1. Press the SET button for less than 2 seconds when Fuel Used is showing in the right hand window of the instrument panel display (to zero the Fuel Used).
2. Then, for at least five consecutive fuel fills, record the total litres added (but no more than 500 litres), according to the service station fuel bowser.
3. If this is different to the Fuel Used reading, enter Customisation Mode and access the Fuel Calibration option. The Fuel Used is shown in the centre display. Press the ▼ or ▲ button to adjust the display to show the actual total fuel used according to the service station fuel bowser.
4. Press the MODE button to continue to EXIT OPTIONS MENU.

Note: The Fuel Calibration % automatically adjusts as the fuel used is adjusted. The default fuel calibration is 100.0%. The maximum it can be adjusted to is 120.0%, the minimum is 80%.

EXIT OPTIONS MENU

This option is used to either exit Customisation Mode options menu or to return to the start of the options menu. Use the ▼ or ▲ button to select 'Yes' or 'No'. If 'Yes' is selected, the trip computer exits calibration mode and returns to the previous trip computer display. If 'No' is selected, the menu jumps back to the start of the options menu, RESTORE TO FACTORY SETTINGS display. Press the MODE button to continue.

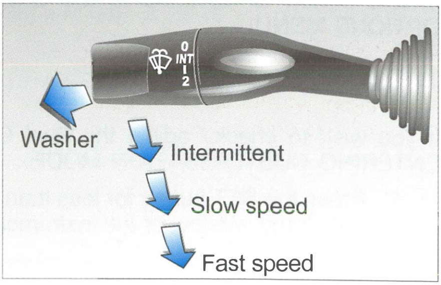


WIPERS AND WASHERS

The lever on the left of the steering column controls the front and rear wipers and washers, which operate when the ignition is turned to either on or accessories.

Front wipers and washers

Never operate the wipers on dry glass, as this will damage the rubber and scratch the glass. To spray water onto the windscreen, pull the lever towards you and hold as long as required. This automatically turns on the wipers for a short time, if not already operating.



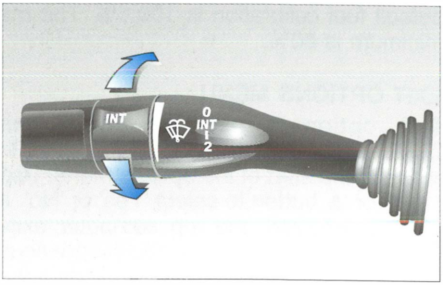
Push the lever down to turn on the wipers. If just held gently down the wipers sweep 'intermittently' once every few seconds. The wipers sweep intermittently as long as the lever is held.

Pushing the lever further down, to the first 'stop' switches the wipers to the intermittent position and allows the hand to be removed from the lever.

Pushing the lever to the second 'stop' turns the wipers to slow speed. Pushing the lever further down, to the third stop, turns the wipers to fast speed.

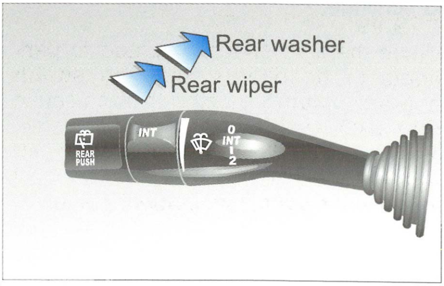
Variable intermittent: The frequency of intermittent wipe can be varied by moving the middle section of the lever, marked 'INT'. Rotate up for a more frequent wipe, or down for a less frequent wipe.

Refer to Chapter 7 when topping up washer fluid.



Rear wiper and washer

Push the lever away from you, to the first 'stop', to turn on the rear wiper. To turn on the rear washer, push the lever further and hold as long as required.



The rear wiper usually has a delayed sweep. The rear wiper changes to a continuous sweep when reverse gear is selected.

Note: As a safety feature, if the rear glass is open, the rear wiper will not turn on. Also, if the rear wiper is in use, the rear glass cannot be opened. Refer also to Chapters 2 and 3.

LIGHTS

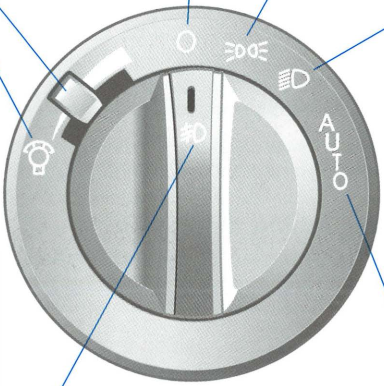
OFF
All lights off

Dimmer – instrument lighting
The instruments are automatically illuminated when the park lights are switched on.

The lighting can be adjusted anywhere between dim and bright by holding the tab in the bright or dim position until the desired level is reached.

Park lights
Turns on the park, tail, rear licence plate and instrument panel lights.

Headlights
Turns on the headlights (in addition to the park lights).



Fog lights (if fitted)
When the light switch is turned to park lights or headlights, pull the switch outwards to turn the fog lights on and push the switch inwards to turn the fog lights off. The fog light graphics on the switch illuminate with park lights and on / off indication is via the instrument panel.

Auto
Headlights and park lights automatically switch off and on, as required. High / low beam selection must still be manually controlled.

The light sensor is centrally mounted on the top of the dashboard. Be careful not to cover up the sensor, as this may affect the light operation. Occasionally the sensor should be wiped clean.

LIGHTS cont.

Automatic headlights

When the headlight switch is left in the AUTO position, the headlights and park lights automatically switch off and on with the ignition switch or through the approach lighting feature (see 'Headlights on when approaching the vehicle'). High / low beam selection must still be manually controlled.

Automatic headlight sensitivity

The headlights can be set to come on automatically at different light levels. The headlight sensitivity can be adjusted to Early, Normal or Late, refer to CUSTOMISATION MODE previously in this chapter.

Automatic headlights off

Leaving the head / park lights on when the engine is not running will eventually flatten the battery. To prevent this, the park / head lights switch off when the ignition has been switched from on to off and the driver's door is opened, the vehicle senses that the driver has forgotten to switch off the lights. The lights stay off until the ignition is again switched on, or the lights are turned back on manually via the headlight switch.

The headlights can be set to automatically switch off after you have locked the vehicle and walked away, which is useful for illuminating a path for example. To set / adjust the time delay from when the driver's door is opened to when the lights automatically switch off, refer to CUSTOMISATION MODE previously in this chapter.

If you wish to have the lights on when leaving the vehicle, wait until they have been automatically switched off, then turn the light switch first to off, then to park or headlights.

Headlights on when approaching the vehicle

This feature is designed to provide additional security, when returning to the vehicle at night. When the UNLOCK button on the ignition key is used, the vehicle's exterior lights will come on for a predefined time or until the vehicle is relocked.

However, the lights will only turn on to the position that the headlight switch is in when the vehicle was left, i.e. if the switch is in AUTO or headlights ≣D, the headlights will come on, if the switch is in ≡D0≡ park lights, the park lights will come on, if the switch is off, no lights will come on.

To set / adjust the time the headlights stay on after the UNLOCK button has been pressed, refer to CUSTOMISATION MODE previously in this chapter.

Headlights and dimming instruments note

When the headlights are switched on the instruments are automatically illuminated. Once illuminated the driver has the ability to adjust their brightness, see previous page. Some illuminated areas of the vehicle have been linked to the brightness control (trip computer, headlight switch, radio etc.). This means that the interior ambience can be adjusted to your preference.

When the headlights are turned off then on, the brightness level reverts to the last adjusted setting.

Personal identity keys on higher luxury levels: When the key is inserted in the ignition and turned on, the system identifies the key and sets the brightness and headlight time delay to the last adjustments used for that key. Also refer to Chapter 2.

LIGHTS cont.

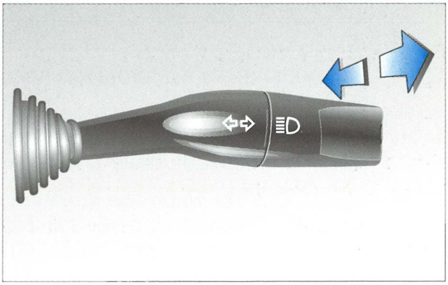
Fog lights (if fitted)

Fog lights are designed to provide a different illumination of the road to the usual headlight beam. Depending on the density of the fog, different combination of lights will improve vision. For instance, in very heavy fog, vision may be improved by turning the headlights off, and just having the park lights and fog lights on.

Driving speed should be reduced in fog.

It is recommended that you check your State's laws regarding use of fog lights when driving.

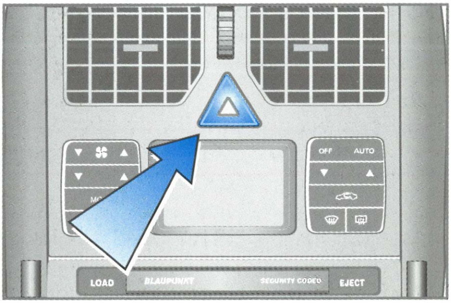
High / low beam



High / low beam is controlled by the lever on the right side of the steering wheel column. With the headlights on, push the lever away from you, until you feel a click, then release. The headlights will change from low to high beam. When the high beams are in use, a blue ≣D symbol on the instrument panel is displayed.

It is also possible to flash the high beams for signalling purposes (even if the headlights and / or ignition are switched off) by pulling the lever towards you; the lights remain on high beam as long as the lever is held.

Hazard warning flasher



Press the switch to turn the hazard warning flasher on and off. The hazard warning flasher works regardless of the ignition position.

When turned on, all turn signals flash continuously.

Use the hazard warning flasher to warn other drivers any time your vehicle becomes a traffic hazard, day or night.

Use of the hazard warning flashers while the vehicle is moving may be illegal in some states or countries.

RADIO / CD AND CLOCK

Radio, CD and clock

Detailed information on the operation of the radio and CD is provided by the Audio System Handbook in the glovebox.

Operating information for adjusting time, adjusting the antenna height, Personal Identification Number (PIN) and remote control of the radio via the steering wheel is provided on these pages.

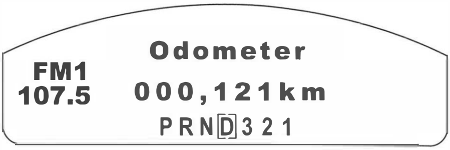
Radio / CD display

If 'Radio Display' is turned on in Customisation Mode, then the more relevant audio system information also shows on the instrument panel centre display.

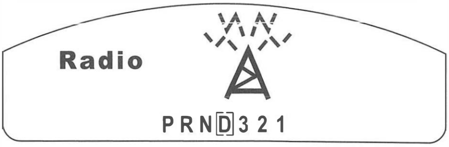
Note:

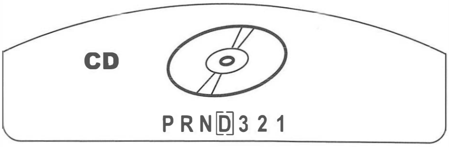
- The audio system information only shows if the radio / CD is the original factory fitted item.
- If a warning message is active, the radio / CD information will not display, as the warning messages have priority.

If the radio / CD is on when the ignition is turned on, the display shows the trip computer information with the radio / CD information on the left side.



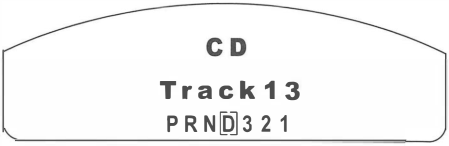
If the radio / CD is turned from OFF to ON while the ignition is on, the display shows the main animated radio or CD screen (depending on the music source selected). After 2 seconds the display reverts to the trip computer screen with the radio / CD information on the left side of the display.

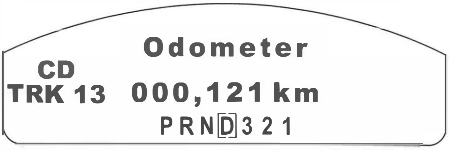




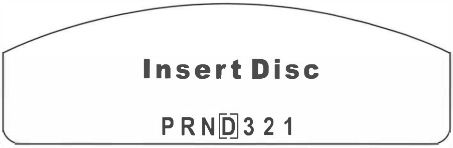
If the radio / CD is turned off, no radio / CD information shows on the display.

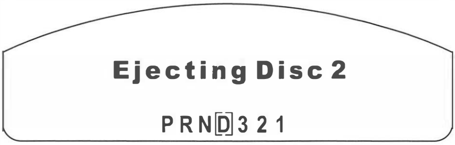
On selection of a radio station, radio band, CD, CD track or function, the display shows the selection in the centre of the screen. After 2 seconds the display reverts to the trip computer screen with the radio / CD information on the left side of the display.

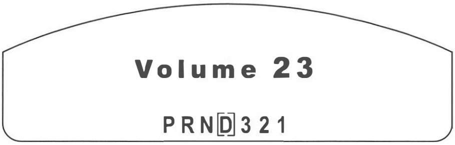




RADIO / CD AND CLOCK cont.







The CD display provides message screens informing the driver when to insert or remove discs, etc. It also informs the driver of current functions being performed by the unit such as 'Ejecting Disc 2' or 'Please Wait...'. The display remains until the action is completed or the driver presses the trip computer MODE button. The display reverts to the last trip computer display.

When changing the audio system settings such as Volume, Bass, Treble, Balance, Fader and Boost, the display shows the relevant information. Once the adjustment has been made, the display shows for 2 seconds before reverting to the original trip computer display.

Clock – to adjust time

Time or radio frequency can be selected with the **TIME** button. When the time is displayed and the radio is on, the time can be set as follows:

- Press the **TIME** button for more than 2 seconds. The display shows ‘TIME ADJ’ (or 'SET TIME', depending on luxury level) and the time will flash.
- **To adjust the hours:** press the **⏮ SEEK ⏭** button.
- **To adjust the minutes:** press the **◀◀ TUNE ▶▶** button.
- Press the **TIME** button to save the new setting.

Note: The radio automatically exits clock setting mode if no adjustments are made for 8 seconds.

Radio Personal Identification Number (PIN)

Your radio has an electronically coded security system. The system recognises the unique vehicle into which your radio has been installed. If the radio is kept in the vehicle (even if the battery or the radio has been removed and reinstalled) the PIN should not be required.

If for some reason the electronic link between your vehicle and the radio is disrupted, the radio will prompt you for a 4-digit PIN code to be entered, use the radio station preset buttons to enter the PIN code (see ‘Security Release Procedure’ in the Audio System Handbook in the glovebox for more details).

The PIN is supplied on your Security Card (refer to page 2-2). As the PIN is the only means of enabling operation of the radio, we recommend the Security Card be placed in your wallet or personal card holder. **Do NOT leave it in the glovebox of your vehicle.** The PIN should also be written down and kept with other important documents.

If your Security Card is lost and the PIN is not recorded elsewhere, the PIN can be requested from your Holden Retailer, after supplying the proof of ownership and the Vehicle Identification Number shown on the inside front cover of this handbook. There may be a nominal charge for this service.

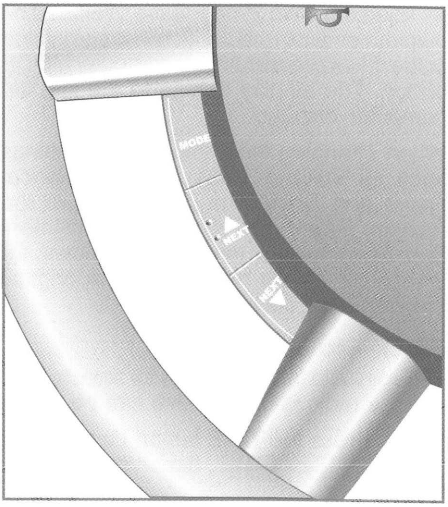
Note: For added security, a small red light on the radio blinks while the ignition is off.

REMOTE RADIO / CD CONTROLS

Remote controls for the radio / CD are provided by buttons located on the left side and right side of the steering wheel centre pad.

Left side

Pressing the MODE button alternates between different audio modes: radio FM1, radio FM2, radio AM and CD.



When the radio is playing:

Favourite radio stations can be assigned a 'preset' number so that they can be quickly recalled (refer to the Audio System Handbook in the glovebox).

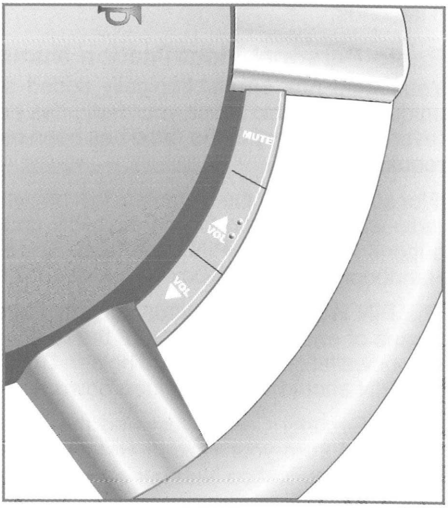
When the radio is playing, pressing the NEXT ▲ button switches the radio up to the next preset station, for example radio station number 3 is playing; NEXT ▲ is pressed; radio station number 4 starts playing. Likewise, NEXT ▼ switches the radio down a preset station.

When a CD is playing:

Tapping the NEXT ▲ or ▼ buttons switches between CD tracks.

(CD Changer only) Pressing and holding the NEXT ▲ or ▼ button switches between the different CDs.

Right side



The VOL ▲ or ▼ buttons turn the volume up or down. Either hold down the button for as long as required, or tap the button, for small changes in volume.

The MUTE button switches the volume down or up by 20 decibels. Therefore, sound is only heard if the radio was very loud before muting.

In addition, pressing volume ▲ immediately un-MUTES the radio.

ANTENNA

The antenna shaft should be regularly cleaned with a soft cloth, water and a mild detergent. This not only helps the antenna to retract but also aids radio reception.

In addition to the normal external antenna, higher luxury levels have a 'diversity' antenna, which improves FM reception. The diversity antenna is incorporated in the tailgate window and can be noticed as lines in the glass, above the demister lines.

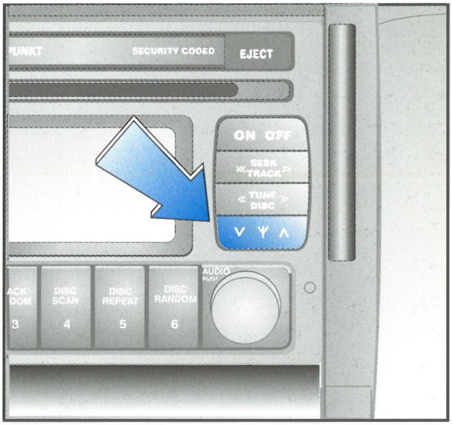
The best reception is always gained when the antenna is fully extended. However, to guard against breaking or bending the antenna, it may need to be retracted (for overhanging trees, car wash etc.).

Electric antenna – height adjustable type

When the radio is switched on the antenna will extend to the height setting used prior to switching the radio off. The height can be adjusted by pressing the switches in the radio, as shown.

Therefore, if you need to lower the antenna (clearance for overhanging bushes etc.) while driving, press the down arrow to lower the antenna. When clear of the obstacle the antenna should again be fully extended so as to gain the best radio reception.

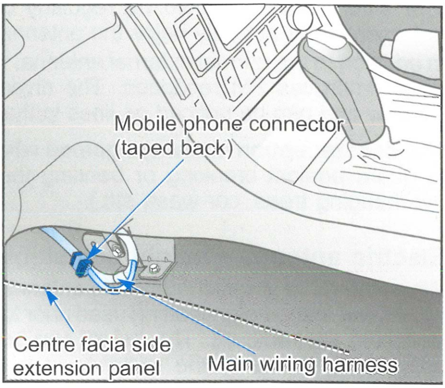
Personal identity keys on higher luxury levels: When the key is inserted in the ignition and turned on the system identifies the key and sets the antenna height to the last adjustment used for that key. Also refer to Chapter 2.



PHONE

Mobile phone connection

A power connection for fitting a mobile telephone is provided for all models. The connector is taped under the centre console, on the passenger's side.

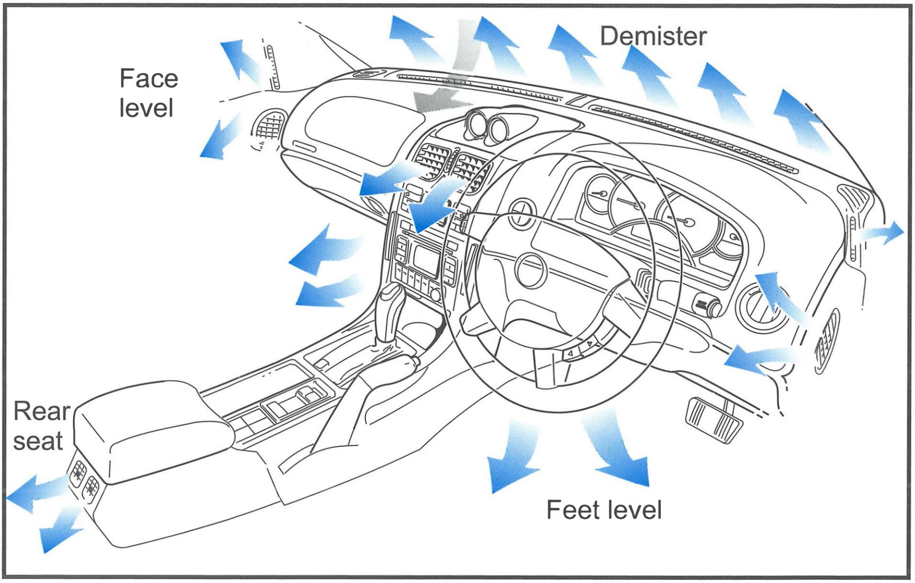

Mobile phone connector
(taped back)
Centre facia side
extension panel
Main wiring harness

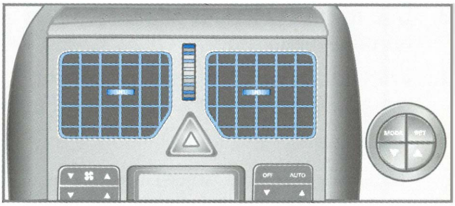
VENTILATION SYSTEM

The vehicle features a flow-through ventilation system for your comfort. Under reasonable conditions, it should not be necessary to open the windows at any time. Outside air (except when recirculate is selected) is drawn into the vehicle through the opening between the bonnet and the windscreen. Do not allow this grille to become clogged with debris, such as leaves or snow. Any leaves should be removed each time you wash your vehicle (recommended weekly).

Vents

The air may be directed to different types of vents.





The face and rear seat vents have adjustable vanes which may be swivelled up / down and left / right to allow directional control of air flow.

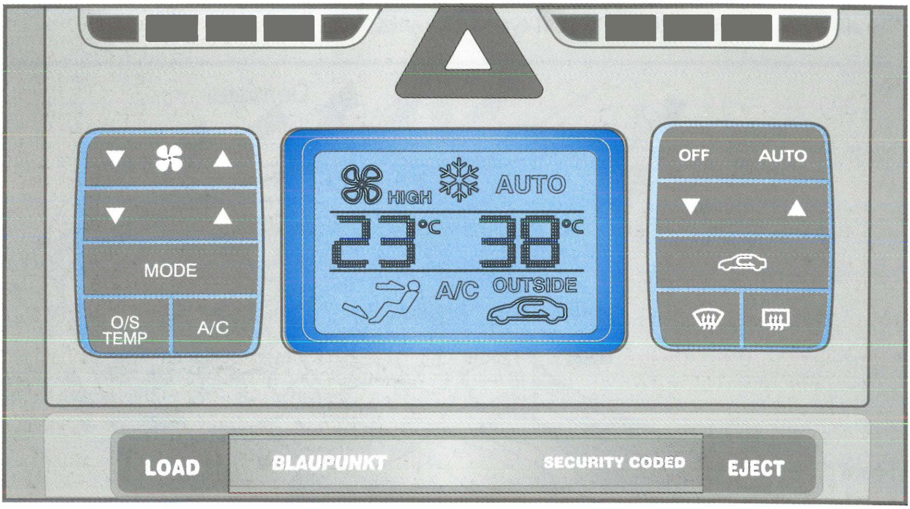
These vents have shut off doors which can also be used to adjust the air volume to suit individual comfort. For example, air flow at the centre vents can be reduced to enhance air flow at the side vents or rear seat vents.

The feet level and demister vents are fixed, as these direct air to the windscreen, feet and side windows in the best possible way.

CLIMATE CONTROL

The Climate Control panel is located in the centre of the dashboard. It is designed to maintain the interior of your vehicle at your desired temperature.

There are two types of Climate Control panels: single zone and dual zone. The only difference being that the dual zone type (provided on higher luxury level vehicles) allows provision for the right and left sides of the vehicle to be maintained at different temperatures.



Automatic operation

1. Start the engine.
2. Press the AUTO button if the AUTO icon is not already displayed.
3. Use the red (warmer) or blue (cooler) arrows to adjust the temperature read-out. Try an initial setting between 22°C and 24°C.
4. With dual zone types use the left set of arrows to select the temperature required for the passenger and the right set of arrows to select the temperature for the driver.
5. Allow the system to stabilise for a few minutes.
6. You may need to adjust the angle of the air vents to your personal requirements, perhaps with the air vents pointing directly at your body or face for initial cooling, and then pointed away for a more general effect once you have cooled down.

The setting does not change between the ignition being turned off or on (except if extreme hot or cold is selected). Therefore, you need only change the setting when you wish to alter your comfort level.

CLIMATE CONTROL cont.

Dual zone type (if fitted)

'Dual zone' (provided on higher luxury level vehicles) allows for the right and left sides of the vehicle to be maintained at different temperatures.

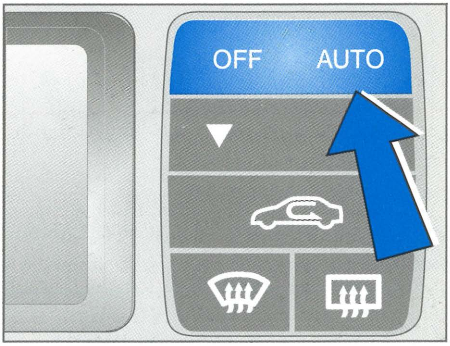
The left and right sides can be set to different temperatures or can be linked to operate identically, i.e., the passenger's side will mirror whatever the driver's side is changed to.

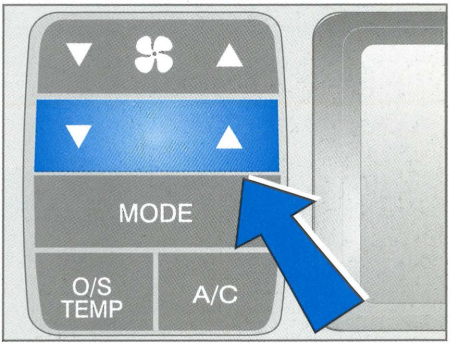
To link:

- Press and hold the AUTO button for at least 2 seconds. Both displays blink to indicate linking has happened.
- Linking automatically happens if the passenger's and driver's sides are set to the same temperature when the ignition is turned on.

To unlink:

- Press either of the passenger's temperature switches.



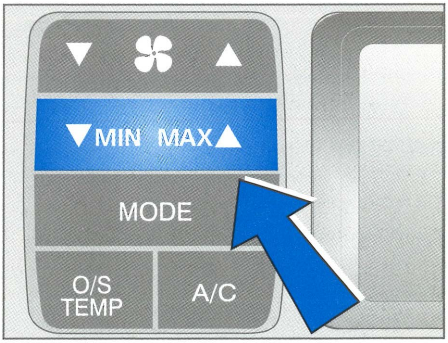


Single zone type (if fitted)

'Single zone' maintains the interior of the vehicle at the one selected temperature.

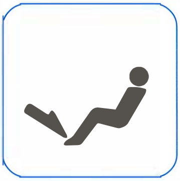
On single zone types, pressing the ▼MIN button moves the temperature to the coldest end of the scale (17°C). The display will show a 'C' for cold. Subsequently pressing of the ▼MIN button moves the temperature back to where it was.

Pressing MAX▲ moves the temperature to the hottest end of the scale (30°C). The display will show a 'H' for hot. Subsequently pressing of the MAX▲ button moves the temperature back to where it was.



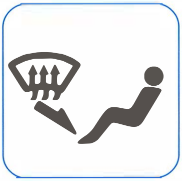
Note: The system must be on (display showing) to make any adjustments.

CLIMATE CONTROL cont.



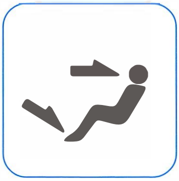
FLOOR

Air is directed to the floor vents.



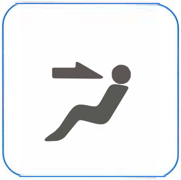
DEMIST AND FLOOR (BLEND)

Air is directed to the floor and windscreen demist outlets.



BI-LEVEL

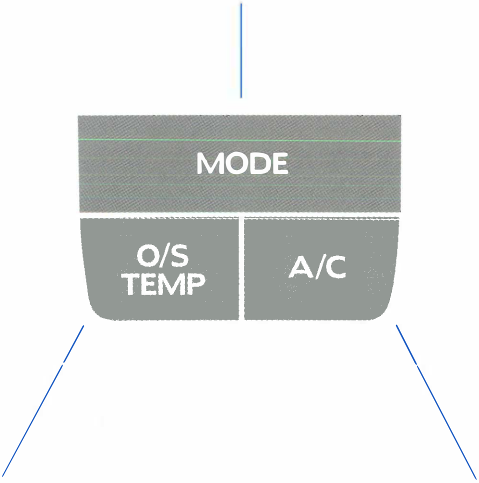
Cooler air is directed to the face and rear vents and warmer air is directed to the front floor vents.



FACE

Air is directed to the face and rear vents.

MODE Tap this button to switch between floor, front demist and floor, bi-level and face modes.



O/S TEMP Tap this button to alternate the display between temperature outside the vehicle and normal display.

Pressing other buttons to adjust the climate control will also change the display from showing O/S temp to showing the normal display.

Pressing O/S TEMP does not take the system out of automatic mode.

A/C Switches air conditioning between off and on.

To conserve fuel, you may wish to switch off the air conditioning in cold weather. The climate control maintains automatic control of all other functions but does not turn on the air conditioning, even if cabin temperature gets too high.

When 'A/C' is switched on, the air conditioning operates as required, removing moisture and heat from the air.

Air conditioning should be switched on for at least 5 to 10 minutes once every 2 weeks to lubricate the A/C seals.

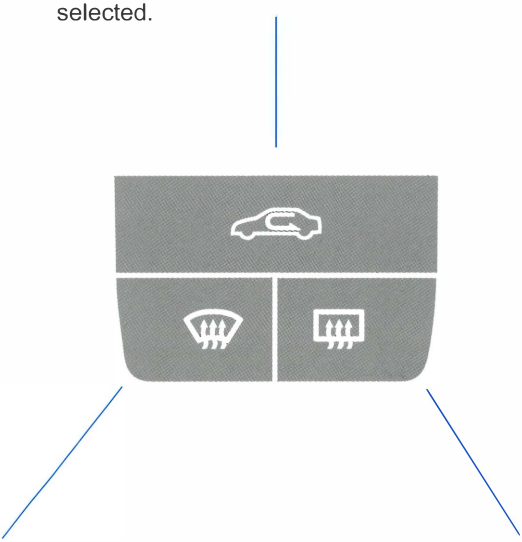
CLIMATE CONTROL cont.

RECIRCULATION Switches air intake to recirculated air. **Recirculate re-uses interior air and is therefore not recommended for long periods of time**.

Recirculate position should NOT be used if occupants are smoking.

Recirculation automatically switches off after 40 minutes, or it can be manually turned off by pressing the switch again.

The recirculation symbol is shown on the LCD display when recirculation is selected.



WINDSCREEN DEMIST Climate control cannot determine demist requirements. Therefore, tap this button for demisting the windscreen and side windows. The system changes the outlets to demist and switches on the air conditioning.

The light in the switch glows and the windscreen demist icon is shown on the LCD display when demist is selected.

Press the switch again to switch off.

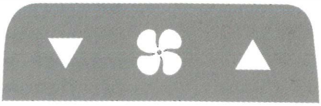
TAILGATE WINDOW DEMIST Press the tailgate window demister switch to turn the demister on. Press the switch again to turn the demister off.

The light in the switch glows when demist is selected.

To avoid unnecessary electrical consumption, the demister switches off automatically.

CLIMATE CONTROL cont.

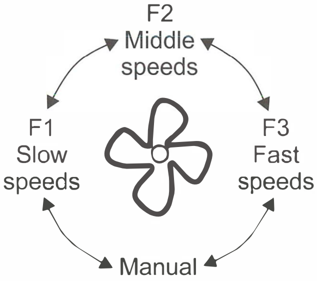
FAN Press ▼ or ▲ on the fan switch to increase or decrease the fan speed.



Five manual fan speeds are available. When the fan has been adjusted manually the fan blades will fill according to the fan speed, for speeds 1 to 4. The HIGH icon appears next to the fan graphic on speed setting 5.

When the AUTO button is pressed all functions, including the fan speed, go into auto mode. When the fan is operating automatically, the graphics of the fan blades are clear.

In auto mode, three sets of fan speeds are available for individual preference. When AUTO is first selected, the fan will use the middle set of fan speeds (F2). Press the fan ▼ or ▲ buttons to change to the faster (F3) or slower (F1) set of fan speeds. **Note:** The F1, F2 or F3 icons appear briefly below the fan graphic when the button is pushed, representing the fan speed range selected.



If the Manual position is selected the fan will go out of auto mode and back to manual mode.

When the engine is not running the fan speed is limited to conserve the battery.

OFF Switches the system off and on.

AUTO Pressing this button switches the system to full automatic control (the AUTO icon is shown on the LCD display).

Manual override of any controls can impede the system maintaining the set temperature. It is designed to operate with a minimum of manual adjustment. The AUTO icon on the display goes out when not in full auto mode.

Allow the system to stabilise before changing comfort settings.

CLIMATE CONTROL NOTES

Ignition keys

Vehicles fitted with 'priority key locking' systems (refer to Chapter 2) have the ability to remember individual adjustments for different keys.

When the key is inserted in the ignition and turned to on, the system identifies the key and sets the climate control to the last adjustments used for that key.

Adjusting the temperature

When the system has stabilised, and you wish to adjust the setting, it is recommended that the adjustment be made one tap at a time (each tap is 1°C) until you are comfortable. Your comfort setting depends on clothing, your acclimatisation, and the angle at which you have directed the vents.

The system can be set anywhere between 17°C (coolest) and 30°C (warmest). Pressing the red arrow when 30°C is already showing causes the display to show 'H' (hottest); pressing the blue arrow when 17°C is already showing causes the display to show 'C' (coolest).

What the system does

In automatic operation the system always responds quickly to cooling / heating requirements. It is not necessary to set a cooler / hotter temperature than required to ensure fast cooling / heating.

The system should be left on automatic operation, as it can then:

- turn air conditioning on and off,
- vary the temperature of the air entering the cabin,
- recirculate interior air or take air in from outside the vehicle,
- vary fan speed,
- select the vents through which the air is delivered.

For example, on a cold morning, air may be directed to the windscreen, then as the engine warms up warm air is directed to the foot vents, then later still the system changes to bi-level, the fan slows down and changes to face and foot vents.

You may need to manually adjust the angle of the vents at various times, for instance to direct cool air onto your body on hot days, or past your body when the temperature is mild.

Quick cool down

To aid the climate control when first entering the vehicle on a hot day, open the windows to allow the hot air to escape. After a minute or two, close the windows to allow the system to work more effectively.

Engine idling with automatic transmission

If your vehicle is stopped for long periods in hot weather with the engine running and the air conditioner operating, select Neutral or Park with the transmission selector.

CLIMATE CONTROL NOTES cont.

Unsealed roads (prevention of dust entry)

When following another vehicle on unsealed roads (and the dust is airborne), it is recommended that recirculation be selected. However, if the dust is not airborne it is recommended that the setting be on outside air (recirculation off) and that the fan be on a high speed. This builds up positive air pressure to prevent dust entry. Ensure in both cases that all windows are closed.

Ice warning

❄

The snowflake symbol ❄ shows on the display to warn the driver when there is a danger of ice on the road due to the low ambient (outside) air temperature.

WARNING:

The road surface may be icy, even though the display indicates a few degrees above zero.

Something wrong?

X

This symbol shows on the display when there is a fault in the system. You should see your Holden Retailer, who has the necessary equipment to diagnose the system.

Sensors

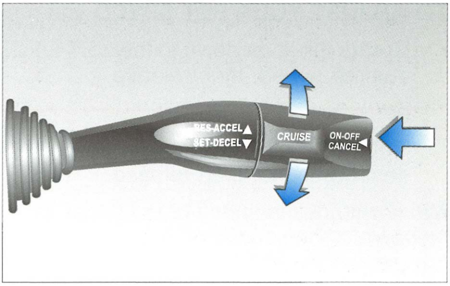
The climate control uses different sensors to maintain your desired temperature.

One sensor, the sunlight sensor, is fixed to the top of the dashboard and can be seen as a small rectangle in the centre. It is therefore important that the sensor is not covered or that there are no metal objects close by, as this may block the input. Occasionally the sensor should be cleaned.

Another sensor, the outside temperature sensor, is located under the front of the vehicle and relies on air moving across the sensor. You may notice a difference between the temperature shown on your climate control display and the temperature shown on roadside temperature displays. This is due to the vehicle's sensor being closer to the road, which radiates heat.

Another sensor is the in-car sensor, which is located in the dashboard (refer page 1-3) and measures the temperature inside the vehicle. It is important not to cover the sensor with stickers.

CRUISE CONTROL



The cruise control maintains your vehicle's speed without you having your foot on the accelerator pedal.

The cruise control lever is on the right side of the steering column.

The ON-OFF / CANCEL switch is at the end of the lever and is activated by pushing in towards the direction of the steering column.

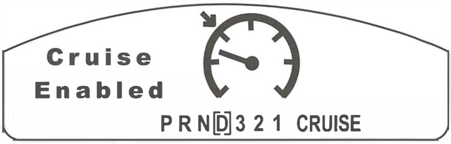
The outer half of the lever rotates up to the RES-ACCEL position or down to the SET-DECEL position.

The SET-DECEL position is used to set initial speed and to decrease speed.

The RES-ACCEL position is used to resume 'memory' speed and to increase speed. It can also be used to set initial speed.

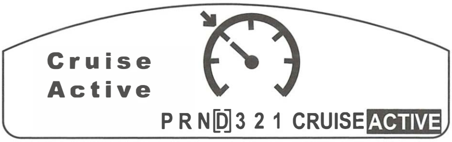
TO SET INITIAL SPEED:

1. Turn on the ignition.
2. Press the ON-OFF / CANCEL switch. The 'Cruise Enabled' animated symbol and small CRUISE icon displays on the instrument panel. After 2 seconds the display reverts to the CRUISE icon indicating that the power is on.



3. Press the accelerator pedal until travelling at your desired speed (must be above 40 km/h) and then rotate the lever down, to the SET-DECEL position.

   The 'Cruise Active' animated symbol and CRUISE ACTIVE icon now display on the instrument panel. You may now release both the accelerator pedal and the lever, as the cruise control is now maintaining the speed.



4. After 2 seconds the display reverts to the CRUISE ACTIVE icon indicating that the cruise control is now engaged.

CRUISE CONTROL cont.

TO ADJUST YOUR SET SPEED you may either:

- Rotate the lever down to the SET-DECEL position until the vehicle slows down to the desired speed, then release.

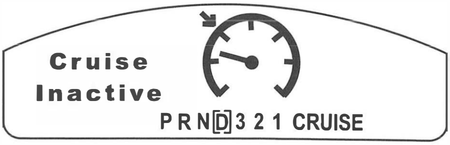
  or

- Rotate the lever up to the RES-ACCEL position until the vehicle accelerates up to the desired speed, then release.

Minor changes in speed (2 km/h) can be achieved by momentarily rotating the lever; up or down. When reducing speed, remember that the cruise control is not designed to operate under 40 km/h.

TO PAUSE THE CRUISE CONTROL:

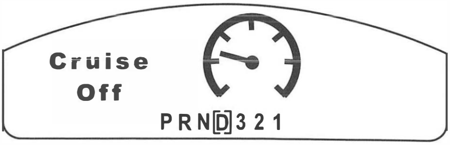
Press the brake pedal or press the ON-OFF / CANCEL switch once.



This deactivates the cruise control, the 'Cruise Inactive' animated symbol displays and ACTIVE icon turns off, but cruise control retains the speed in its memory. To regain the memory speed you have only to momentarily rotate the lever to the RES-ACCEL position, provided you are travelling over 40 km/h. Holding the lever in the RES-ACCEL position for longer than 1 second causes the vehicle to accelerate.

TO TURN THE CRUISE CONTROL COMPLETELY OFF:

Press the ON-OFF / CANCEL switch twice.



The 'Cruise Off' animated symbol displays and the CRUISE icon turns off.

Pressing the ON-OFF / CANCEL switch once pauses the cruise control but keeps the system ready and the speed in memory.

A second press turns the system off completely and wipes the speed memory clear.

A third press turns the system back on to ready, without any speed memory.

In addition, turning off the ignition completely turns off cruise control and wipes the speed memory clear.

CRUISE CONTROL cont.

WARNING:

- Do not use the cruise control when road or driving conditions require varying speeds. A constant speed isn't practical in heavy or varying traffic, or on winding, slippery or rough roads.
- Remember that when both the 'CRUISE' and the 'ACTIVE' symbols are showing the cruise control is maintaining your speed. Taking your foot off the accelerator pedal will not reduce speed. To deactivate the cruise control you must either press the brake pedal or push the ON-OFF / CANCEL switch.
- The cruise control will not apply the vehicle's brakes. Therefore, the vehicle may gain speed when going down steep hills.
- When climbing steep hills (particularly when towing) it is possible for the vehicle to lose speed. You may need to switch off the cruise control and use the accelerator pedal.
- The cruise control will be cancelled if the traction control system becomes active, indicated by the 'Low Traction' animated warning on the instrument panel display.

AUTOMATIC TRANSMISSION: If cruise control is maintaining vehicle speed the transmission overrides power / normal selection and operates in cruise mode, providing optimum driveability. Cruise mode is neither a power or normal pattern and the PWR symbol switches off when cruise control is maintaining vehicle speed.

REVERSE PARKING AID

Reverse Parking Aid

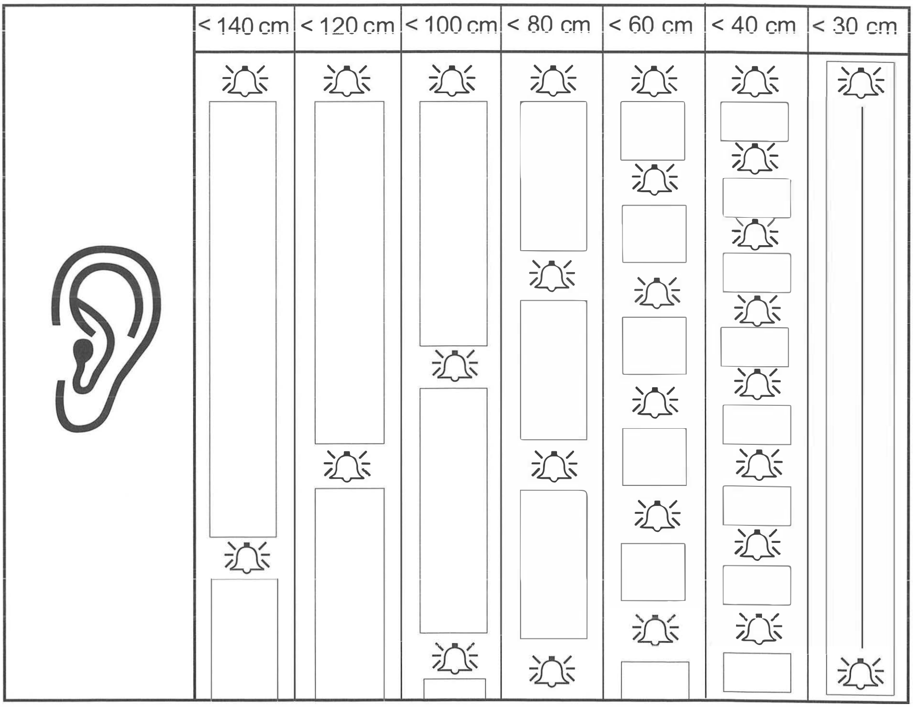
Reverse Parking Aid (RPA) is designed to help the driver reverse the vehicle by indicating (with varying tones) the distance to the nearest obstacle behind the vehicle.

The RPA starts automatically when the ignition is on and reverse gear is selected. A short single tone from the speaker indicates that the RPA is operational.

An obstacle is indicated when it is approximately 140 cm from the rear bumper. As the distance to the obstacle reduces, the repetition rate of the warning tone increases. The tone will become faster and faster until it becomes a continuous tone at a distance of less than 30 cm.

Hint: *To assist in hearing the RPA warning tones while reversing, mute the radio / CD temporarily by pushing the MUTE button on the right side of the steering wheel.*

Note: While reversing sometimes a short tone may be heard when there are no objects or obstacles visible to the driver. This can be due to such things as ground reflections, playing children or animals. In such cases be especially careful.



REVERSE PARKING AID cont.

Tow bar: When a tow bar is fitted to the vehicle, the RPA requires adjustment to allow for the protrusion of the tow bar. Your Holden Retailer will automatically adjust the RPA when fitting the tow bar. If the RPA should require tow bar adjustment by the owner due to the removal or installation of a tow bar, proceed as follows:

- Ensure that the ignition is turned off.
- Open the tailgate and carefully remove the rear right-hand light trim cover with a flat-blade screwdriver.
- Locate the lower white RPA harness connector:

  Tow bar fitted – disconnect the white harness connector.

  Tow bar removed – connect the white harness connector.
- Install the rear light trim cover and close the tailgate.

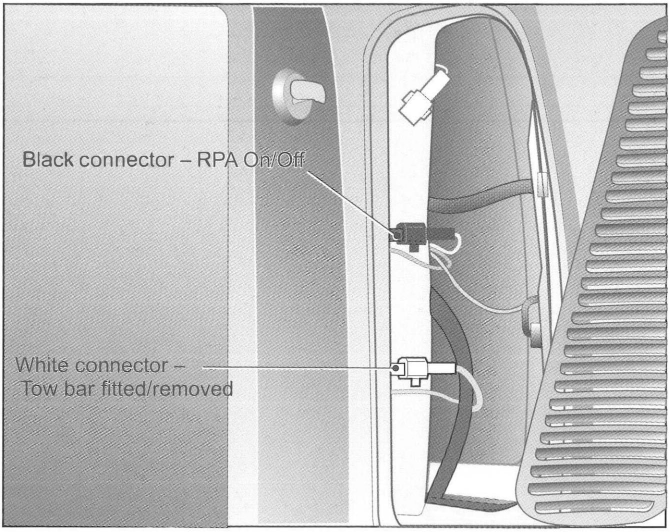
Auto Off: The RPA is automatically turned off when a trailer or caravan wiring is connected to the vehicle.

Disabling the RPA: On some occasions you may wish to turn the RPA off to prevent hearing constant warning tones while reversing, such as when a bicycle rack is fitted to the tow bar (a bicycle may be recognised as a close object by the RPA). To turn the RPA on / off, proceed as follows:

- Ensure that the ignition is turned off.
- Open the tailgate and carefully remove the rear light trim cover with a flat-blade screwdriver.
- Locate the black harness connector mid way along the RPA harness.

  RPA off – disconnect the black harness connector.

  RPA on – connect the black harness connector.
- Install the rear light trim cover and close the tailgate.


Black connector – RPA On/Off
White connector – Tow bar fitted/removed

REVERSE PARKING AID cont.

Errors: Errors are indicated to the driver as follows:

- Deep continuous warning tone while reversing – acoustic error (eg. caused by excessive water or dirt on the parking sensors).
- No tones or a deep continuous warning tone after engaging reverse gear – system defective (contact your local Holden Retailer).

Safety instructions

When reversing the vehicle, the driver must still drive in such a way as to avoid all risks to others on the road. The RPA is an additional help and does not release the driver from special obligations of care when reversing the vehicle.

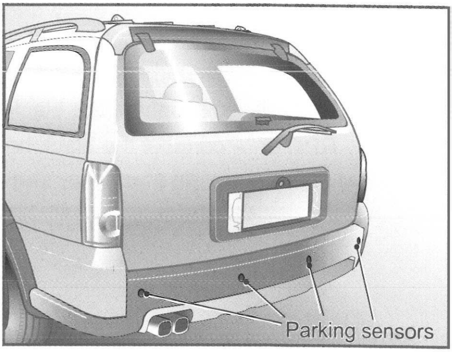
The legal responsibility for recognising and assessing obstacles remains in the hands of the driver, despite the use of the RPA.

A prompt warning is only possible if the driver reverses the vehicle slowly.

Obstacles with sharp edges, smooth surfaces, pointed or round objects (for example loading ramps) may not be recognised or recognised properly in certain circumstances as a result of their physical reflection properties.

The driver is responsible for all collision damage caused when reversing, including damage caused by unclear signals (error indicator, refer to 'Errors' above), ignoring the warning tone, driver error or incorrect signals as a result of physical conditions.

The RPA uses sensors in the rear bumper. It is the responsibility of the driver to ensure that snow, ice or sharp objects are removed from the sensors before driving away in the vehicle to prevent any impairment to the RPA's function. To avoid damaging the sensors, do not use hard or sharp objects to clean the sensors.



NAVIGATION SYSTEM (if fitted)

Navigation system (if fitted)

Detailed information on the operation of the in-car navigation system (SATNAV) is provided by the supplement in the glovebox.

Note: If a vehicle fitted with a SATNAV system is towed, the antenna will need to redefine the position of the vehicle, as only the previous location prior to towing is stored in the memory. This may take a few minutes to do (while the vehicle is being driven) and it will appear that the system is not functioning correctly during the update process.

NOTES

NOTES

CHAPTER 2

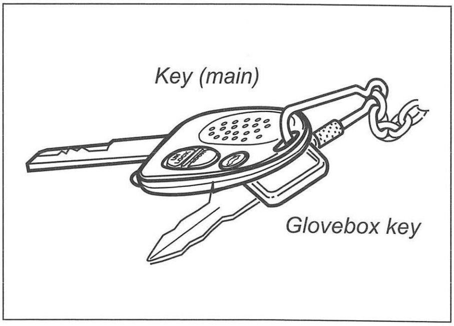
Locks

Page
2-2 Keys
2-4 Door locks
2-7 Alarm
2-9 Ignition lock
2-10 Child safety and free turning door locks
2-11 Tailgate lock
2-12 Bonnet lock

KEYS

Key (main)

This key operates all locks and ignition, except for the glovebox.

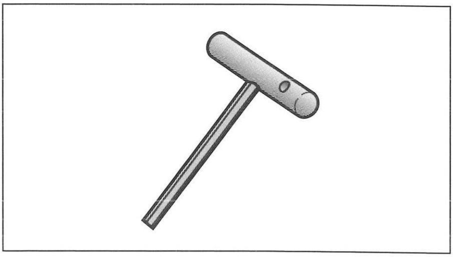


Glovebox key

The glovebox key locks and unlocks the glovebox. This key can usually be kept in the unlocked glovebox. Then, when leaving your vehicle and master key with a car park attendant you can lock valuables in the glovebox, and take the glovebox key with you.

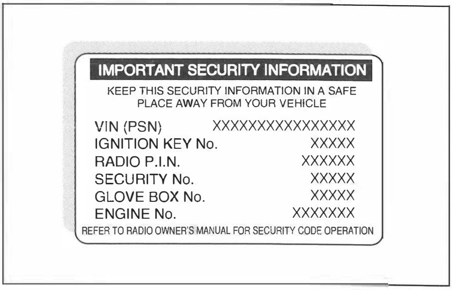
Roof rack key

A key is provided to adjust the tiedown anchors (if fitted) on your roof rack. The key is originally placed inside the glovebox of your new vehicle. Refer to Chapter 10 for information about roof racks and adjustment of the anchors.



Key numbers – security card

The security card lists various security numbers for your vehicle, including key numbers, and the radio PIN. Please keep the card in a safe place, away from your vehicle. If a key is lost, a replacement can be ordered through any Holden Retailer by quoting the key code number, security number and providing proof of ownership.



IMPORTANT SECURITY INFORMATION

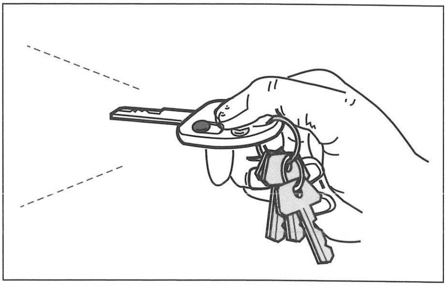
KEEP THIS SECURITY INFORMATION IN A SAFE PLACE AWAY FROM YOUR VEHICLE

VIN (PSN)	XXXXXXXXXXXXXXXX
IGNITION KEY No.	XXXXX
RADIO P.I.N.	XXXXXX
SECURITY No.	XXXXX
GLOVE BOX No.	XXXXX
ENGINE No.	XXXXXXX

REFER TO RADIO OWNER'S MANUAL FOR SECURITY CODE OPERATION

Pressing buttons

When pressing the key buttons ensure that other keys on the key ring are not between the main key and the vehicle. Other keys can obscure the signal being transmitted to the vehicle. Also refer to Notes about the keys on page 2-6.



KEYS cont.

Personal identity keys (if fitted)

This system provides two different memories of electronic settings, for different keys. For instance, one driver may have a preferred radio station. Pressing the UNLOCK button on their key will automatically customise the radio for that driver. However, the other driver may prefer a different station. Pressing their UNLOCK key button will tune the radio to their station.

The features remembered by each key are (if fitted):

- antenna height,
- instrument dimmer level,
- climate control settings,
- automatic transmission power / normal mode selection,
- radio settings,
- trip computer settings,
- time delay for automatic lights off, and
- all other features personalised in Customisation Mode, refer to Chapter 1.

Features revert to the last setting used for each key.

Note about additional keys: Only two different memories are available, memory one and memory two. If a third key is made, the third key becomes memory one and the other two keys become identical memory twos.

If the vehicle battery has been disconnected, some settings may be forgotten. Your adjustments will be remembered the next time you adjust the feature.

DOOR LOCKS

Lock

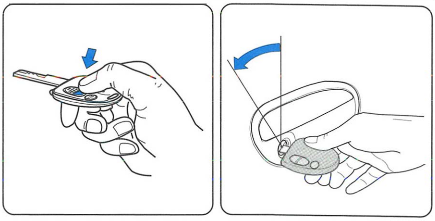
Doors are locked when the lock knob is down.

Your vehicle also has an 'Auto lock in drive' feature which locks the doors automatically when the transmission selector is shifted out of P (park). This feature can be selected from the instrument panel Customisation Mode (Refer to CUSTOMISATION MODE in Chapter 1).

PREFERRED METHOD: Press the LOCK button on the key within 4 metres of the vehicle to lock all doors and tailgate and set the alarm (if fitted). The vehicle's turn signals briefly flash once when the signal has been received.

Note: The door lock indication can be selected between the turn signals flashing or the turn signals flashing accompanied by the sounding of the horn, refer to CUSTOMISATION MODE in Chapter 1.

Once to lock



ALTERNATIVE METHOD: Insert the key in the driver's door lock and turn towards the rear of the vehicle, then turn it back to the vertical position and remove.

Note: The Alarm is not set using this method.

IF STAYING IN THE VEHICLE: Press the door lock knobs down.

Note: Pushing down either front door lock knob locks all doors at the same time.

Deadlock

For further protection when leaving the vehicle, you can deadlock the doors. Deadlocking electronically jams all the electric locks so that no door can be opened, even if entry is gained by breaking glass.

WARNING:

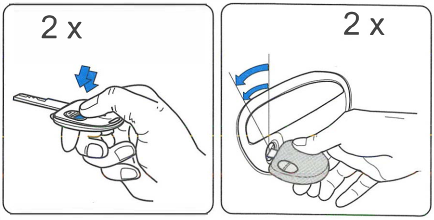
Do not use deadlock if there are people in the vehicle. The doors cannot be unlocked from inside.

To engage deadlock

PREFERRED METHOD: Press the LOCK button twice in succession. That is, press the LOCK button once to lock the vehicle, then press it again (within 10 seconds) to engage the deadlock. The vehicle's turn signals give a long flash of approximately 3 seconds (and the horn chirps, if selected).

ALTERNATIVE METHOD: Insert the key in the driver door lock and turn the key twice towards the rear of the vehicle. That is, once to lock the doors, then a second time to engage the deadlock.

Twice to deadlock



DOOR LOCKS cont.

Note: If unsure whether the vehicle is locked or deadlocked, press the LOCK button on the key. If the vehicle is already deadlocked the lights will give a long flash; if the vehicle is locked, the lights will give a short flash, but will not engage the deadlocking. If the LOCK button is pressed twice within 10 seconds, the lights will give a long flash to indicate that deadlocking has occurred.

To disengage deadlock

Press UNLOCK on the key (within 4 metres of the vehicle). This will unlock the doors and tailgate. Therefore, undeadlocking happens simultaneously, when unlocking the doors.

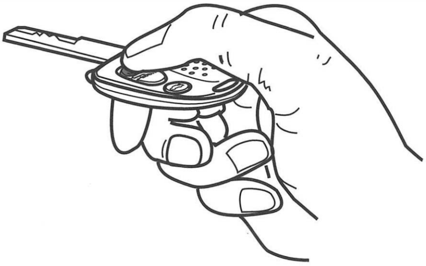
Unlock

Press the UNLOCK button on the key within 4 metres of the vehicle. The turn signals flash twice (and the horn chirps twice, if selected) and the interior light turns on for a short time.

If UNLOCK is pressed once, the driver's door and tailgate unlock. The other doors undeadlock but remain locked. If UNLOCK is pressed a second time, or is held down for more than half a second, all the doors unlock.

If you prefer to have all doors unlock with a single press, the above two stage unlock feature can be changed to all unlock from the instrument panel Customisation Mode (Refer to CUSTOMISATION MODE in Chapter 1).

Press UNLOCK once to unlock driver's door; twice to unlock all doors.



Note: If the key is turned towards the front of the vehicle in the door lock cylinder to unlock the vehicle, the doors will unlock but the alarm (if fitted) will be set off as soon as a door is opened.

If locking has not worked

- If the lock system is overloaded as a result of repeated operation in a short time interval, the power supply is cut off for approximately 30 seconds.
- **Vehicles fitted with alarms:** The door lock system has been designed to make the vehicle horn chirp rapidly five times if it detects a fault in the lock system when the LOCK button is pressed. You should check to see that the doors have locked.
- **Vehicles without alarms:** The door lock system has been designed to flash the turn signals when the vehicle is locked with the LOCK button. If this does not happen it indicates a fault and you should check to see that the doors are locked.

DOOR LOCKS cont.

How the door lock knobs work

- Pulling up any door lock knob unlocks all doors.
- Pushing down either of the front door lock knobs locks all doors; pushing down either of the rear door lock knobs locks only that door.
- Either rear door may be locked behind you by pressing the lock knob when the door is open, then shutting the door firmly. It is not necessary to hold the handle up when shutting. However, the lock knob of front doors cannot be pressed when either door is open.

Notes about the keys

- The key has a lithium battery inside the key head, which should last more than 5 years with normal use. A weakening battery is indicated by a progressive loss of range, which means you must be closer to the vehicle when pressing the key. Originally the key should have a range of 4 metres. The battery inside the key is **not** rechargeable. A flat key battery requires replacement of the key head.
- Tinting the vehicle windows reduces the range of the key if the tinting material has a metallic film.
- When a button on the key is pressed it sends a signal to the vehicle. The receiver of the signal can be seen as a small rectangle on top of the dashboard, in the centre. The receiver is also used to measure sunlight. It is therefore vital that the receiver is clean, not covered and that there are no metal objects close by, as this may block the signals.
- The LOCK button on the key will not work if the ignition is switched on or if the driver's door is open. The 🚗 button on the key will not work if you are travelling over 20 km/h.
- The key buttons may not work if parked near high radio activity, such as under TV towers (most likely in high lookout car parks).

  The key buttons will not work if the battery inside the key is flat. Try turning the key in the ignition on then off again and remove. Try pressing LOCK on the key again. If it still does not work a replacement key may be needed from your Holden Retailer.

  If, for any reason, pressing the key buttons will not work, the doors can still be locked and unlocked by turning the key in the driver's door lock.

  - Turn the key towards the rear of the vehicle (once) to lock all doors.
  - Turn the key towards the rear of the vehicle a second time to set the deadlock.
  - Turn the key towards the front of the vehicle to unlock and unset the deadlock. If the vehicle is fitted with an alarm system, opening the door may cause the alarm to trigger. If this happens turn the ignition to the on position to shut off the alarm.
- If the battery in the vehicle is so flat that there is not enough power to unlock doors when the UNLOCK button on the key is pressed, the driver's door can still be unlocked by turning the key towards the front of the vehicle in the door lock. The door lock knob does not pop up but pulling the handle will still open the door.

ALARM (if fitted)

Switching on and off

The alarm system is turned on when the LOCK button on the key is pressed, and turned off when UNLOCK is pressed. Therefore, locking the doors by pressing LOCK not only locks all the doors but (after a short delay) also sets the alarm system.

When set off

The alarm is triggered when any of the doors, bonnet or tailgate are opened or a 'hot-wire' attempted; the alarm sounds and the turn signals and dome light flash.

To turn it off:

- press UNLOCK on the key

  or

- turn the ignition on

  or

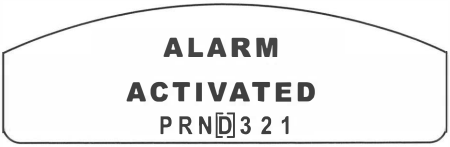
- allow the alarm to time out and reset itself, to guard against further break-in attempts.

Break-in

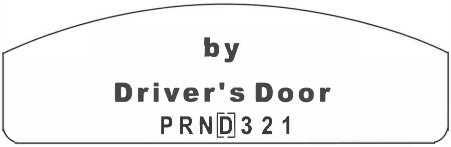
The exterior turn signals should flash twice when returning to your vehicle and pressing UNLOCK on the key.

If they flash three times an attempted break in has occurred whilst the vehicle was armed.

If you wish to find out what set the alarm off, turn the ignition on and look at the instrument panel centre display for the 'ALARM ACTIVATED' message being shown. The 'ALARM ACTIVATED' screen displays first for 1 second, followed by the trigger point screens. The trigger point screens also display for 1 second. If more than one trigger point has been activated the display shows each trigger point screen in sequence for 1 second, returning back to the 'ALARM ACTIVATED' screen.



ALARM
ACTIVATED
PRN$\boxed{D}$321



by
Driver's Door
PRN$\boxed{D}$321

The alarm screens are shown in a continuous cycle until the trip computer switch MODE button is pressed. The centre display then reverts to the last screen shown prior to ignition off. The range of possible trigger point screens, depending upon the model, are:

- 'by Bonnet' – the bonnet has been opened.
- 'by Boot / Tailgate' – the tailgate has been opened.
- 'by Passenger Doors' – one of the passenger doors, either front or rear, has been opened.
- 'by Driver's Door' – the driver's door has been opened.
- 'by Hot Wire' – hot wiring of the vehicle was attempted (ignition on without key inserted).

ALARM (if fitted) cont.

Notes

- Remember, the alarm system is turned off and on when the UNLOCK and LOCK buttons on the key are pressed. When the alarm system is switched on, turning the key in the lock and then opening the doors or tailgate triggers the alarm. The alarm system thinks a break-in has occurred.

- The LOCK button on the key will not function when the ignition is turned on or the driver's door is open.

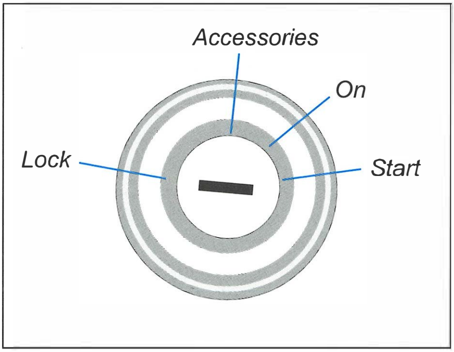
- Pressing LOCK on the key:
  - locks all doors and the tailgate,
  - disables the engine,
  - sets the alarm (after a short delay),
  - switches the interior dome light off (if the switch is set to door position),
  - withdraws the power antenna,
  - flashes the exterior turn signals once (and the horn chirps, if selected),
  - deactivates the power windows.

- Pressing UNLOCK once on the key:
  - unlocks the driver’s door,
  - enables the engine for a short time (as does turning the ignition key in the ignition switch),
  - switches off the alarm,
  - switches on the interior dome and power windows for a short time,
  - flashes the exterior turn signals twice (and the horn chirps twice, if selected),
  - switches on the headlights for a predetermined time (adjustable, refer to LIGHTS in Chapter 1).

- Pressing UNLOCK a second time (or keeping the UNLOCK button pressed for more than half a second):
  - unlocks all the other doors and tailgate,
  - reactivates headlights.

IGNITION LOCK

WARNING:
Do not turn the engine off while the vehicle is moving or there will not be any power assist for brakes or steering. Never remove the key while the vehicle is moving, as this will lock the steering.



Lock

When the key is in the Lock position, all accessories, electrical systems and engine are off.

The key is inserted and removed only from the Lock position.

To help guard against theft, your vehicle engine is automatically disabled shortly after turning the key to the Lock position, indicated by the flashing padlock symbol 🔒 on the bottom left hand corner of the instrument panel.

In addition, the steering is automatically locked when the key is removed. To release the steering lock and enable the engine, re-insert the key and turn it towards the front of the vehicle.

If you have trouble turning the key to unlock the steering, turn the steering wheel slightly to the right or left while turning the key towards the front of the vehicle.

Accessories

When the key is in the Accessories position, the engine is not running but accessories such as the radio and wipers still operate.

On

When the key is in the On position, the engine is ready to start (or is already started) and all electrical systems are active.

Note: The warning lights, which are designed to illuminate at the ignition On position, indicate the systems are working. These are explained near the start of Chapter 1.

Do not leave the switch in the On position for a prolonged period, unless the engine is running, otherwise the battery will discharge.

Start

This is the position for starting the engine. The key should be released from this position as soon as the engine starts. It automatically returns to the On position.

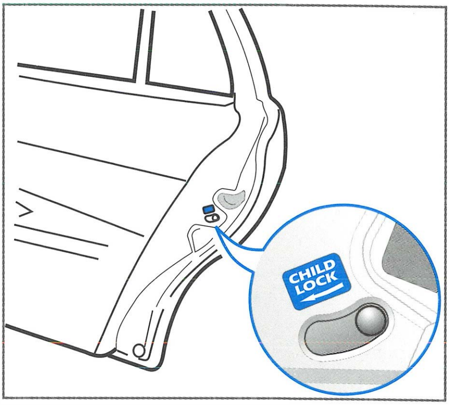
CHILD SAFETY AND FREE TURNING DOOR LOCKS

Child safety rear door locks

Child safety locking helps prevent rear doors being accidentally opened by small children in the vehicle.

The locks are provided on the rear edge of rear doors, accessible when the door is open.

When the lever is in the lock position (to the front of the vehicle) the rear door cannot be opened from the inside. It can be opened only from the outside.



WARNING:

For safety, you should always check that the lock is operating correctly (after setting) by trying to open the door from inside the vehicle.

Free turning door locks

The door lock cylinder is designed to free turn if it is forcefully rotated without the correct key or if the correct key is not fully inserted. To reset, turn the lock with the correct key until its slot is vertical, remove the key and then re-insert it. If the lock still free turns, turn the key through 180 degrees and repeat the operation.

Note: This feature is provided as a theft deterrent – to prevent the lock being forced open. The force required to make the key free turn reduces each time. As the force gets easier with each free turn please do not attempt to demonstrate or test this feature, and always remember to fully insert the key when locking and unlocking the doors.

If you have problems with the free turning door locks, contact your Holden Retailer. Remember that your vehicle is covered for the first 3 years by Roadside Assist. Refer to Chapter 9.

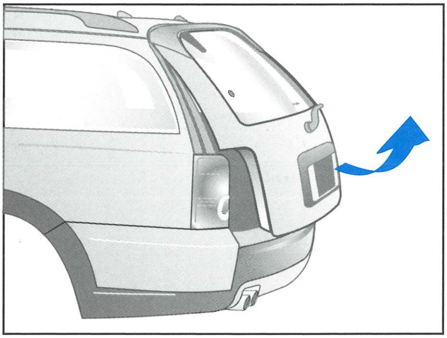
TAILGATE LOCK

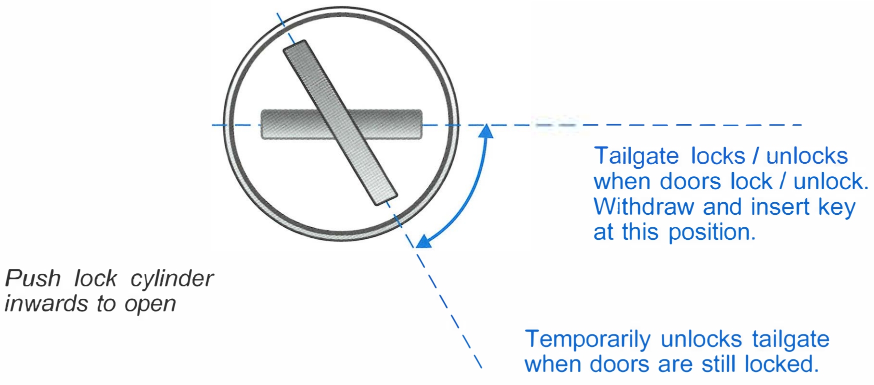
WARNING:
To prevent dangerous exhaust fumes entering the vehicle, close the tailgate when the engine is running. If it is necessary to leave the tailgate open (while carrying bulky cargo) close all windows, switch heater controls to 'fresh' and set fan to highest speed.

The tailgate is locked when the doors are locked, and unlocked when all the doors are unlocked.

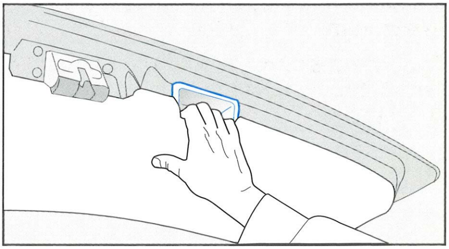
To open: When unlocked, push the tailgate button. After partly opening the tailgate, gas struts automatically take over to lift and hold the tailgate in the fully open position.

The tailgate can be unlocked with the master key. However, the key cannot be withdrawn while it is unlocked – you must turn the key back to the upright (lock) position in order to withdraw the key. This ensures that the tailgate is locked when the doors are locked.




Tailgate locks / unlocks when doors lock / unlock. Withdraw and insert key at this position.
Push lock cylinder inwards to open
Temporarily unlocks tailgate when doors are still locked.

A pull down handle is provided to help you close the tailgate.



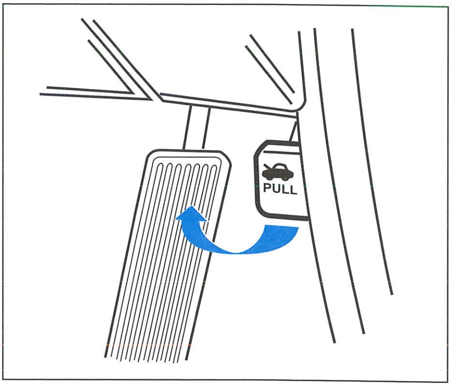
Tailgate window release

The tailgate window of your AWD can also be opened via the key 🚗 button and release button found inside the glovebox. Refer to Chapter 3 for more details.

BONNET LOCK

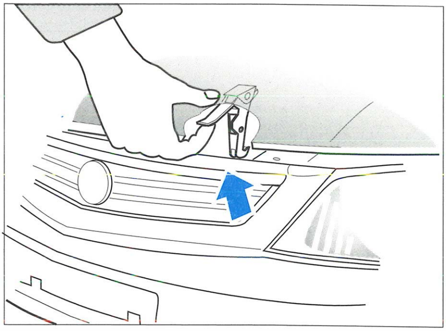
To open

From the driver's side of the vehicle, pull the lever shown towards you.



This allows the bonnet to release but is prevented from opening by the safety catch. To open completely, reach under the centre of the bonnet and move the safety catch upwards. Hold in this position and raise the bonnet.

After you have partially lifted the bonnet, gas struts automatically take over, to lift and hold the bonnet in the fully open position.



To close

For closing, simply pull the bonnet down and push firmly back into place.

CHAPTER 3

Know your vehicle

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3-2 Front seat
3-5 Rear seat
3-6 Rear seat fold down
3-7 Third row seat
3-8 Seat belts
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3-11 Child restraints
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3-30 Park brake, footrest, assist grips and fuel filler release

FRONT SEAT

WARNING – SIDE IMPACT AIRBAGS:

Do not fit unauthorised seat covers as they may impair the deployment of the Side Impact Airbags. Do not position your body or any object (including pillows) between front seats and doors. Front seat occupants should not lean on or sleep against the door. Always sit centrally in the seat (refer also to 'Airbags' in Chapter 6).

SINGLE SWITCH TYPE

The switch fitted to these types of seats electrically controls the height and tilt adjust of the front seats. The other seat adjustments are made manually.

Driver height and tilt adjust

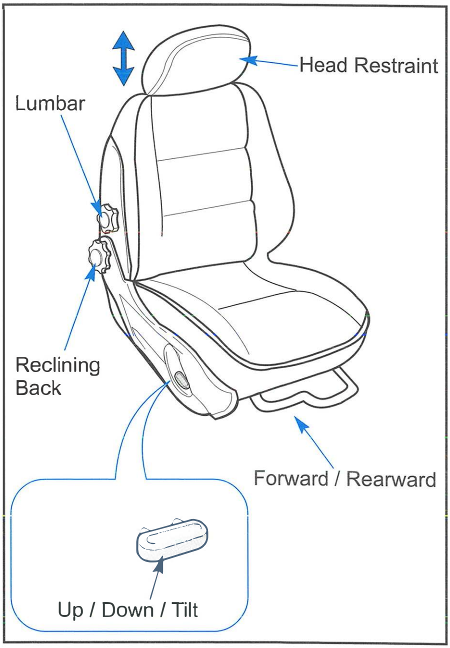
Move the whole of the switch up or down to move the whole of the seat up or down. The switch can also be tilted to adjust the seat angle. Tilt the switch up at the front to tilt the front of the seat up. Similarly, tilt the switch down at the rear to tilt seat down at the rear.

Forwards / backwards

Lift up the bar at the front of the seat, then slide the seat forwards or backwards. Release the bar. Try to move the seat back and forth to check that the catch is fully engaged.

WARNING:

Do not adjust the driver seat when the vehicle is moving as the seat could move suddenly causing the driver to lose control.



Reclining back

Turn the lower toothed wheel on the door side of the seat. The seatback moves in the same direction as the top of the wheel.

WARNING:

To avoid reducing the effectiveness of seat belts, seats should only be semi-reclined when the vehicle is moving. The fully reclined position should only be used when the vehicle is stationary.

Lumbar support

Turn the upper wheel (on the door side of the seat) to alter support given to the lower part of your back.

Head restraint

Note: This safety feature is not intended as a headrest. It is solely for the reduction of whiplash neck movement in an accident involving your vehicle.

To raise the height of the head restraint, simply pull the head restraint up. To lower the height of the head restraint, push in the locking clip at the base of the head restraint pole and push the head restraint down. The upper edge of the head restraint should be approximately at eye level, never at neck level.

FRONT SEAT cont.

DUAL SWITCH TYPE

Two switches are fitted to these types of seats. The front switch is used to electrically adjust the height, the tilt and the movement of the seat forwards and backwards. The rear switch is used to electrically adjust the angle of the back of the seat. Adjustment to lumbar support and head restraints are made manually.

Height and tilt adjust (front switch)

Move the whole of the switch up or down to move the whole of the seat up or down. The switch can also be tilted to adjust the seat angle. Tilt the switch up at the front to tilt the front of the seat up. Similarly, tilt the switch down at the rear to tilt the seat down at the rear.

Forwards / backwards (front switch)

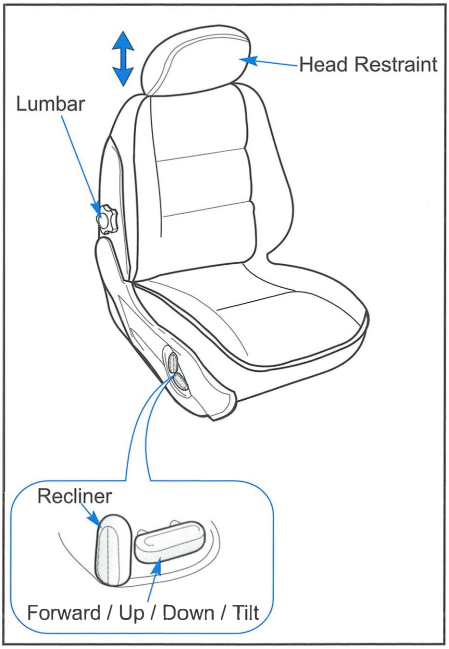
Move the whole of the switch forwards or backwards, as required. The seat moves in the same direction as the switch.

Reclining back (rear switch)

Tilt the switch to adjust the angle of the back of the seat. The seatback moves in the same direction that the switch is tilted to.

WARNING:

To avoid reducing the effectiveness of seat belts, seats should only be semi-reclined when the vehicle is moving. The fully reclined position should only be used when the vehicle is stationary.



Lumbar support

Turn the wheel (on the door side of the seat) to alter support given to the lower part of your back.

Head restraint

Note: This safety feature is not intended as a headrest. It is solely for the reduction of whiplash neck movement in an accident involving your vehicle.

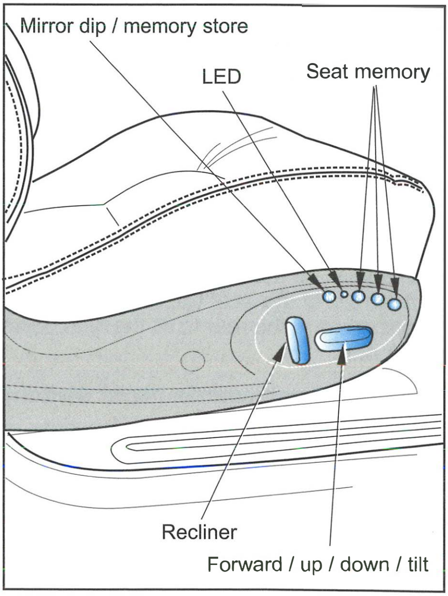
To raise the height of the head restraint, simply pull the head restraint up. To lower the height of the head restraint, push in the locking clip at the base of the head restraint pole and push the head restraint down. The upper edge of the head restraint should be approximately at eye level, never at neck level.

Active head restraints on front seats: In the event of a moderate or severe rear-end impact, the active head restraints on the front seats automatically tilt forwards and up. The head is more effectively supported by the head restraint and the risk of neck injury is reduced.

FRONT SEAT cont.

Memory buttons on driver's seat (if fitted)

The seat can remember three different settings. The memory buttons are located on the outside of the driver's seat, on the lower edge, as shown.



WARNING:

Before moving the seat (for example, by recalling a memory position), ensure that the path both in front of and behind the seat is clear of obstructions.

To recall a stored memory seat and mirror position press and hold a seat memory button. Once the seat has reached the memorised position release the button. If the button is released before the seat reaches the memorised position, the seat will simply stop moving.

To change a memory position, adjust the seat with the controls shown, then adjust the mirrors including the dip position (refer to ‘External mirror’ in this chapter). With the ignition on and gear in Park or Neutral, press the DIP / memory store button (M), confirmed by a single chime, followed by the desired memory button (1, 2 or 3) within 5 seconds. A double chime will be heard when a new memory position is stored. Re-select the Reverse gear and wait for the mirror to be returned to the DIP view to complete the mirror save into the button memory.

Personal Identity Keys: When the UNLOCK button on the key is pressed the system identifies the key and remembers the last settings used for that key. The seat is then automatically moved to the last position used for that key, whether that was a memory button position or whether the seat was adjusted without memorising the position. Refer also to ‘Personal Identity Keys’ in Chapter 2.

Note:

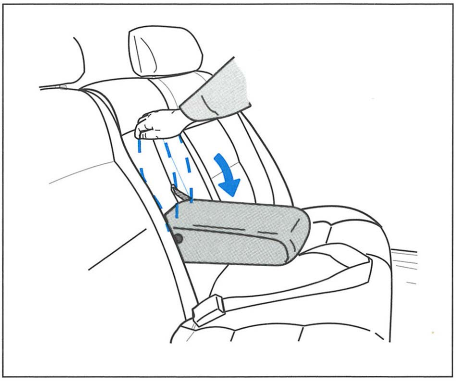
- The LED on the side of the seat will not usually be seen by the driver and is primarily designed for diagnosis.
- The seat will only move to the alternate Personal Identity Key setting if the UNLOCK button on the alternate key is pressed. Putting the alternate key in the ignition will change other Personal settings (radio, climate control, etc.), but not the seat, as it could be dangerous for the seat to move unintentionally. Therefore, to keep all Personal settings synchronised, press the UNLOCK button on the alternate key when using the alternate key while approaching the vehicle. Alternatively, press a memory button on the seat to move the seat.
- The mirror DIP function (refer to ‘External mirror DIP’ further on in this chapter) is linked to the seat / Personal Identity Key memories. That is, each seat memory position also stores whether the mirror was set to ‘DIP’ or not.

REAR SEAT

Rear seat armrest

An armrest is provided in the middle of the rear seat. To fold down the armrest, insert your hand into the top of the armrest and pull down.

The armrest should always be tucked back up into the seatback when folding the seatback forwards, see the following page.



Adjustable rear head restraints

Note: This safety feature is not intended as a headrest. It is solely for the reduction of whiplash neck movement in an accident involving your vehicle.

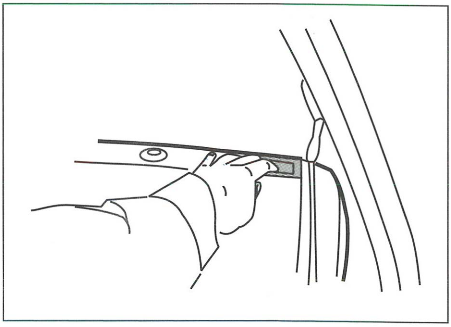
To raise the height of the head restraint, simply pull the head restraint up. To lower the height of the head restraint, push the head restraint down. The upper edge of the head restraint should be approximately at eye level, never at neck level.

REAR SEAT FOLD DOWN

The rear seat is divided into two sections. Either section or both sections may be folded down.

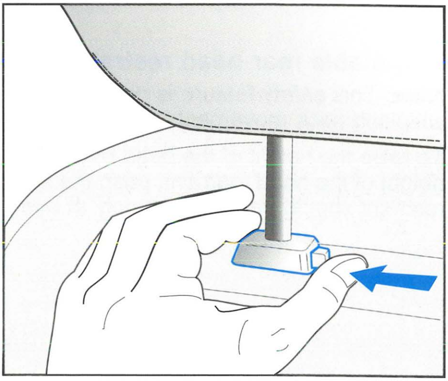
To fold down a section:

1. Push down the lock button located on the upper edge of the seat.
2. Pull the seatback forward and down.



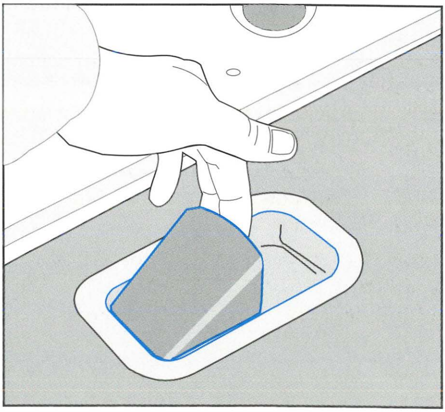
3. If a rear head restraint contacts the front seat while folding the rear seat down, the rear head restraint should be removed.

   Push in the button at the base of the head restraint pole and pull the head restraint up and out.
4. Apply pressure to the seatback when in the down position to lock the seat into place.



To return the seatback to the upright position, pull the release handle outwards while raising the seatback. Return the seat to the upright position. Ensure that the seatback is secured firmly in place and check that the unlock button has re-engaged fully. Ensure that the seat belts are free.

Replace any head restraints by pushing in the button located where the head restraint slots into the seatback while inserting into place.



WARNING:
To avoid injury from passing traffic, it is safer to stand on the kerb side of the vehicle when converting the rear seat.

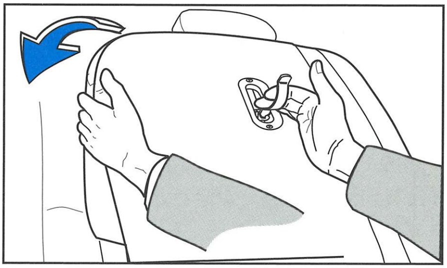
THIRD ROW SEAT (if fitted)

Some models of wagon are equipped with a third row seat which provides seating for two children. Each position is supplied with its own seat belt.

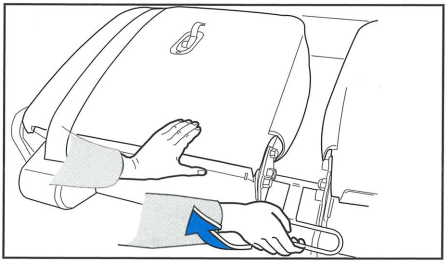
WARNING:

The seat must not be used by a child heavier than 38 kg or taller than 78 cm.

When not in use, either one or both of the seatbacks can be folded forward, by firmly pulling down the lever on the rear of the seatback. This unlocks the seatback so that it can be folded forwards. The lever must also be pulled to unlock the seat when restoring it to the upright position.



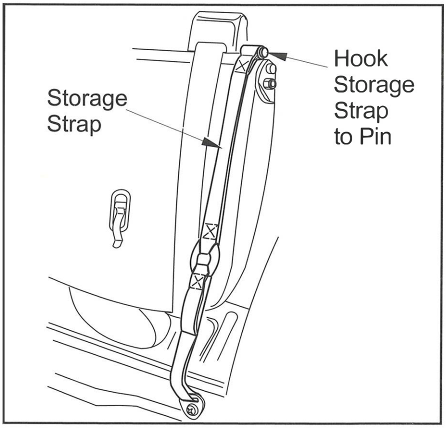
In addition, the whole of the seat can be stowed to gain more cargo area when the seat is not required for passengers. First, remove the head restraints by pushing in the clip at the base of the head restraint and removing the head restraint. Next, fold down both seatbacks as described above. Then, pull up the handle at the base of the seatback and lift up the seat.



The straps that are attached to each side of the seat are used to secure the seat in the stow position. Attach the loop at the end of the straps to the pins on the side of the vehicle and tighten the straps at the buckle.

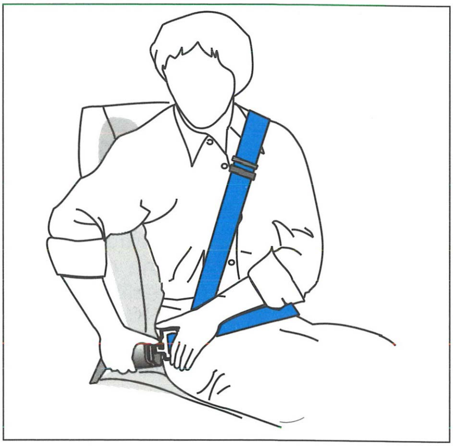
When restoring the seat for passenger use, always ensure that the seat is locked securely into position and that the head restraints are installed.

Note: If a cargo blind is fitted to the rear window it should be removed when passengers are using the third row seat.



SEAT BELTS

Lap / sash belts



To fasten, pull the metal tongue across your body and clip it into the buckle. When the metal tongue is locked safely into place you will hear a 'click'. After fastening, settle the belt at the hip, and run your hand under the sash from hip to shoulder to ensure that the belt fits comfortably and is free from twists. Any extra belt length retracts automatically.

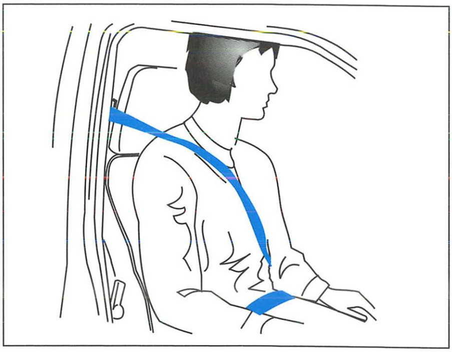
Ensure the lap section of the belt is also free from twists and fits firmly across your hips.

Note: For your safety, the lap section of the seat belt should be worn as low as possible on your hips, not on your waist or abdomen.

The 'emergency-locking retractor belt' allows you to move while the vehicle is travelling normally, but locks immediately on fast braking, impact with a solid object or any quick movement by the wearer.

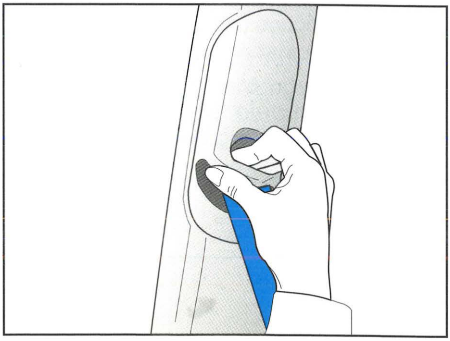
To undo the belt, press the release button on the buckle and allow the belt to retract. Check that it fully retracts without twisting or turning.

Shoulder height adjust



The seat belt is anchored to the vehicle near your shoulder. The position of the seat belt anchor can be adjusted to accommodate the height of the wearer.

Short people should select a low anchor position; tall people a higher one. This ensures, for both safety and comfort, that the webbing of the seat belt fits on the shoulder as shown.



Squeeze the adjuster and move it up or down as required. Ensure the anchor clicks into position.

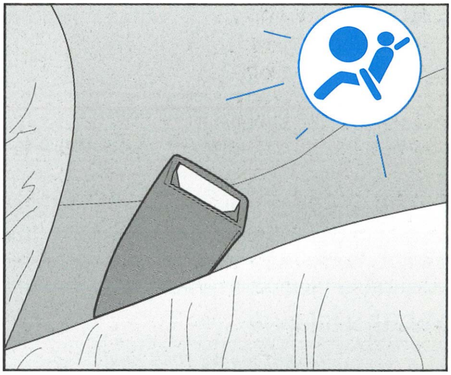
WARNING:

For your safety, the driver's side shoulder anchor should not be adjusted while the vehicle is in motion.

The driver and all passengers should be properly restrained at all times with the seat belts provided in the vehicle. Failure to do so could increase the chance of injury and / or the severity of injury in accidents.

SEAT BELTS cont.

Seat belt pretensioners



The front seat belt system incorporates seat belt pretensioners. Seat belt pretensioners are part of the Supplemental Restraint System (SRS) and operate in conjunction with the airbags. In the event of a moderate to severe frontal collision the belt buckles are pulled downwards, instantly tightening both the diagonal and lap sections of the seat belt.

If the belt pretensioners have been activated, the **SRS** warning light on the instrument panel will not go out after the usual few seconds. This is designed to remind you that the pretension system has been used and therefore needs to be replaced by your Holden Retailer. The seat belts will remain operational, apart from this safety feature.

If the **SRS** warning light comes on at any other time, or if the warning 'SRS Airbag Fault' is displayed on the instrument panel, you should see your Holden Retailer immediately to have the system checked. Refer to Chapter 1 for further information about warnings and reminder indications.

Australian law requires that the driver and all passengers are properly restrained at all times with the seat belts provided in the vehicle. Failure to do so could increase the chance of injury and / or the severity of injury in accidents.

WARNING:

- Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.
- Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.
- Care should be taken to avoid contamination of the webbing with polishes, oil and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.
- It is essential to replace the entire assembly after it has been worn in a severe impact, even if damage to the assembly is not obvious.
- Belts should not be worn with straps twisted.
- Each seat belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.
- No modification or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.
- The positioning of the tongue restrictor must never interfere with, or stop, the belt from fully retracting.

WHICH TYPE OF CHILD RESTRAINT FOR YOUR CHILD?

Children should be restrained at all times and fitted with a child restraint appropriate to their size when travelling in a vehicle. Following are some guidelines about selecting the appropriate restraint for your child.

Infants

Rearward facing infant capsule		
WEIGHT	**HEIGHT**	**APPROX. AGE**
Less than 9 kg	Less than 70 cm	Up to 6 mths

Designed so that in the event of a collision, impact forces will be evenly spread over the baby's back, with minimal jarring to the vulnerable head and neck area.

Young children

Forward facing child seat		
WEIGHT	**HEIGHT**	**APPROX. AGE**
8 to 18 kg	70 to 100 cm	6 mths to 4 yrs

For use when the child is able to sit and easily hold his or her head upright. It is also possible to purchase convertible seats which can be used as a rearward facing child restraint or converted to a forward facing child seat.

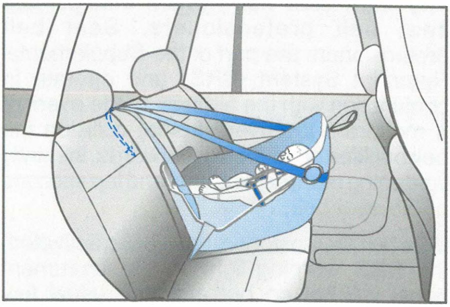
Booster seat with lap / sash seat belt		
WEIGHT	**HEIGHT**	**APPROX. AGE**
–	More than 100 cm	4 to 10 yrs

When children outgrow a typical forward-facing child seat but they are still too small for lap / sash seat belts. A booster seat raises the child so that the knees bend comfortably, the lap / sash seat belt is correctly positioned and the child can see out the window. A rigid booster seat with a back, side wings and sash guide gives the best protection. In assessing the range of children who would benefit from booster seats, height is a better indicator than age or weight.

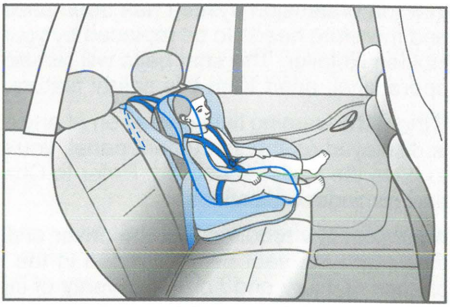
Older children

A child should use a normal lap / sash seat belt only when:

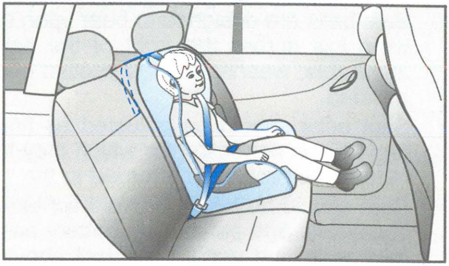
- he / she can sit against the back of the rear seat with knees bent comfortably at the edge of the seat,
- lap belt rests low and snug across the hips – not across the stomach,
- sash belt is centred on shoulder and chest,
- he / she is able to stay seated like this for the entire trip.



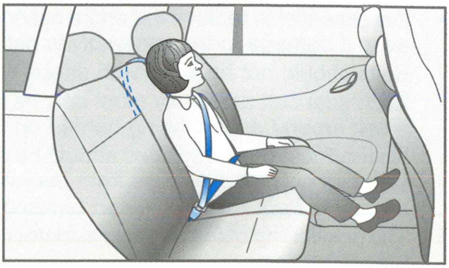
Rearward facing infant capsule



Forward facing child seat

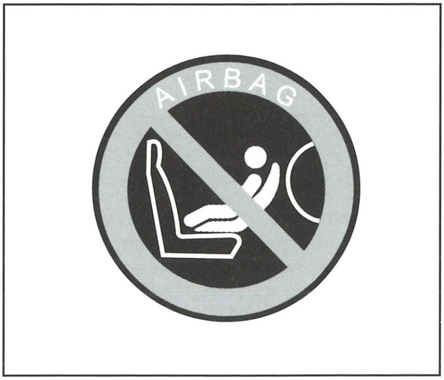


Booster seat with lap / sash seat belt



Adult lap / sash seat belt

CHILD RESTRAINTS



WARNING – EXTREME HAZARD:

Do not fit a child restraint in the front passenger seat as your vehicle is fitted with Front and Side Impact Airbags (SIAB). Your child could be seriously injured if the airbag inflates, as the child's head would be very close to the inflating airbag.

Remember that it is safest for children to be seated in the rear seats.

Children should be restrained at all times when travelling in a vehicle.

Always ensure that the seat belt fits firmly around the child restraint. If a child can not see out of the window, do not raise him / her by means of an ordinary cushion. It will not stay in place in a collision and the child can slip out of the straps and become entangled.

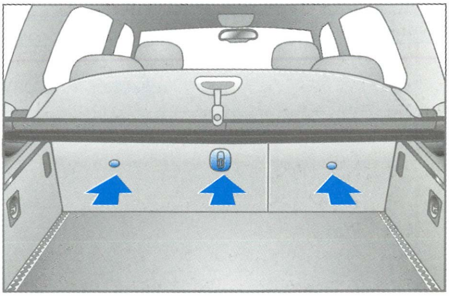
WARNING:

- Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts, harnesses or for attaching other items or equipment to the vehicle.
- Only child restraints that have clips to attach to the vehicle's anchorage fitting (as shown in the following illustrations) are to be used. Earlier types of child restraints may not attach securely to this type of anchor.
- Only Standards Australia approved child restraints and harnesses should be used. You should only purchase a child restraint which carries the appropriate Standards Australia sticker of approval.

Anchorage points

Your vehicle is fitted with three anchorage points for child restraints. An anchor fitting has been provided in the centre position.

Anchor locations are on the rear of the rear seat backs, as shown.



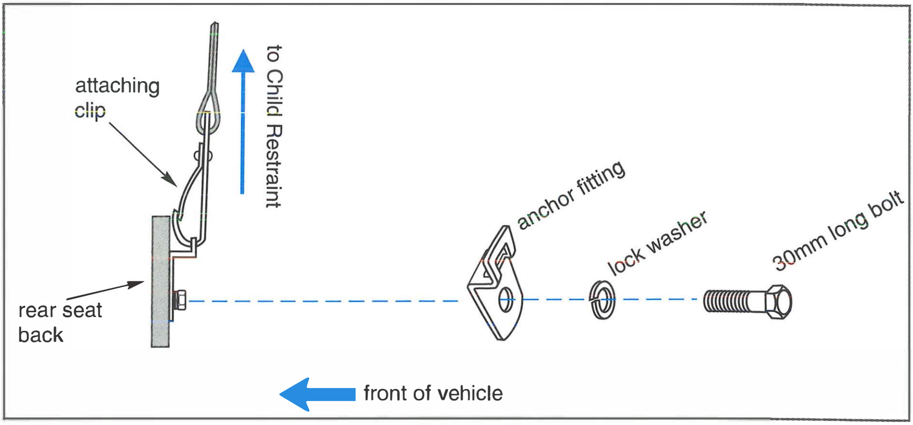
ADDITIONAL CHILD RESTRAINTS

All AWD wagons are fitted with one child restraint anchor in the centre position. Additional anchor fittings may be installed at the other anchorage points in your vehicle as shown. Fittings may be purchased from your Holden Retailer.

WARNING:

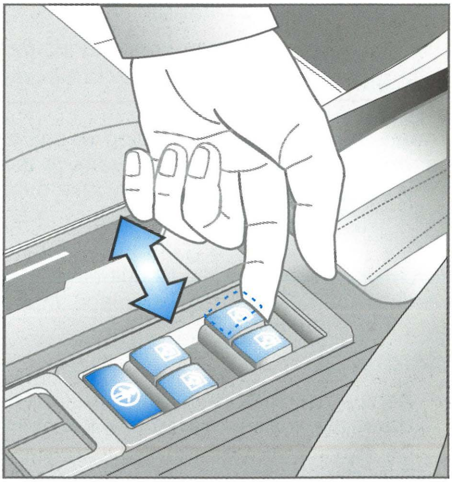
- Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts, harnesses or for attaching other items or equipment to the vehicle.
- Only child restraints that have clips to attach to the vehicle's anchorage fitting (as shown in the following illustration) are to be used. Earlier types of child restraints may not attach securely to this type of anchor.
- Only Standards Australia approved child restraints and harnesses should be used. You should only purchase a child restraint which carries the appropriate Standards Australia sticker of approval.

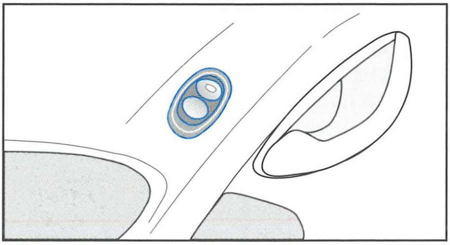
If you wish to put a child restraint in either of the outer positions, first remove the cover plug. Then, install the additional anchor fitting, using the bolt, and lock washer as per the following illustration. Ensure that the bolts are securely tightened to between 15 and 25 Nm (Newton metres). Check with your Holden Retailer if unsure.



WINDOWS

Power windows





The main window switches are located between the front seats.

The switches are operational when the ignition is turned on or the UNLOCK button on the key is pressed.

The switches also remain operational when the ignition is turned off for 60 minutes while the doors remain closed and for 45 seconds after a door is opened.

Note: Green lights in the switches indicate when they are active.

To raise the window, pull up the switch; to lower, push down the switch.

Rear power windows can also be operated by individual switches located on the rear doors.

These rear door switches can be deactivated / reactivated by pressing the 'child safety' switch in the centre console. The rear window switches are deactivated when the switch is in the down position.

Auto down – front windows only

Hold the switch down for more than half a second and then release. To interrupt the 'auto down', move the switch up or down again. Rock the down button to open the window in short steps.

Time delay

The windows can be operated for about one hour after turning off the ignition or pressing UNLOCK on the key, provided all the doors are kept shut. Once a door is opened, the windows can only be operated for 45 seconds. The green 'active' light in the switches will go off when the time delay finishes.

Pressing LOCK on the key disables the windows immediately.

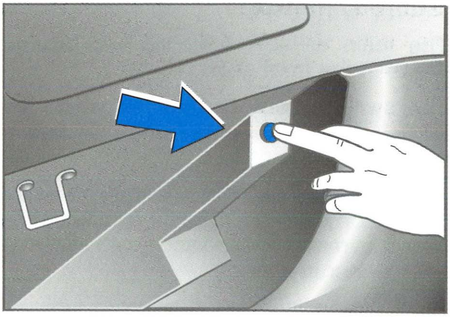
WINDOWS cont.

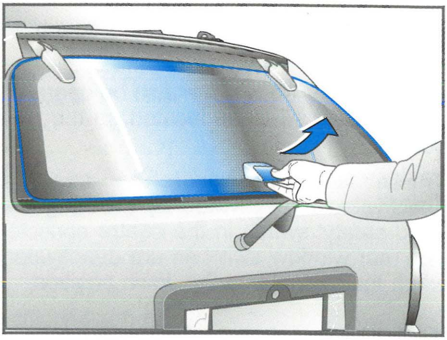
Tailgate window release

Use the 🚗 button on your key or the button found inside your glovebox to release the tailgate window.

Then, open the window by pulling up on the handle provided. After partly opening the tailgate, gas struts automatically take over to lift and hold the tailgate in the fully open position.

To close, use the handle to pull down the window and push it firmly into place. Make sure it is firmly secured.





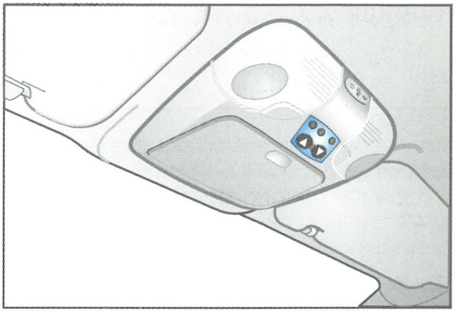
WARNINGS:

- As a safety feature, if the rear glass is open, the rear window wiper will not turn on. Also, if the rear wiper is in use, the rear glass cannot be opened. Refer also to Chapters 2 and 3.
- Driving with the tailgate window open is not recommended. However, if this is unavoidable, have the climate control switched to fresh air and the fan set to high speed.

SUNROOF (if fitted)

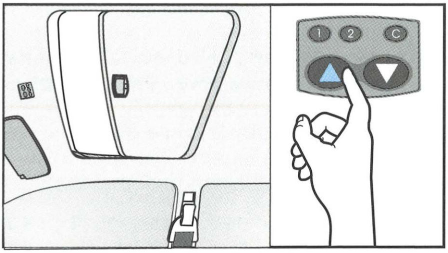
Sunroof (if fitted)

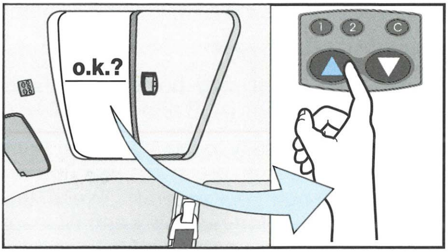
The sunroof control buttons are built-in to the roof console which is located at the centre-front of the roof's interior, directly above the windscreen.



Opening the sunroof

Press the ▲ button briefly (maximum 0.3 second) to open the sunroof fully. Pressing the ▲ button while the panel is moving will stop the sunroof at any desired position. Press the ▲ button once more to resume opening the sunroof.





Closing the sunroof

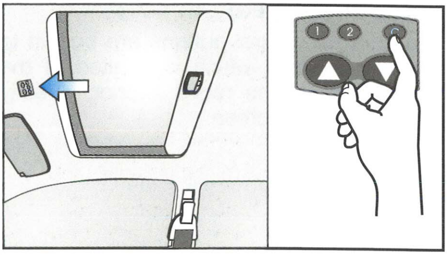
Press the ▼ button briefly (maximum 0.3 second) to close the sunroof fully. Pressing the ▼ button while the panel is moving will stop the sunroof at any desired position. Press the ▼ button once more to resume closing the sunroof.

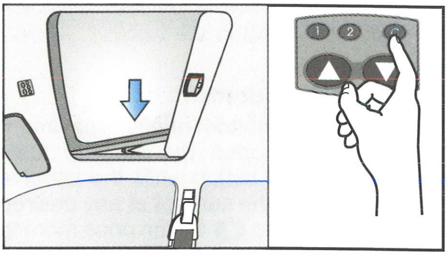
Press the Ⓒ button to completely close the sunroof from any slide or tilt position.

SUNROOF (if fitted) cont.

Auto-close function

After turning off your vehicle's ignition, the sunroof closes automatically, 3 seconds after giving a warning beep. During this 3 second interval, you can stop the sunroof from closing by pressing either of the arrow buttons (▲ or ▼). Once the sunroof has commenced closing, pressing either of the arrow buttons will stop the panel at any desired position.





WARNING:

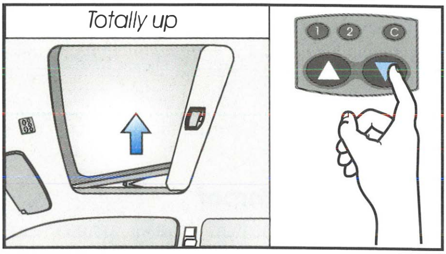
Keep hands and fingers clear of sunroof tilting mechanism when operating sunroof.

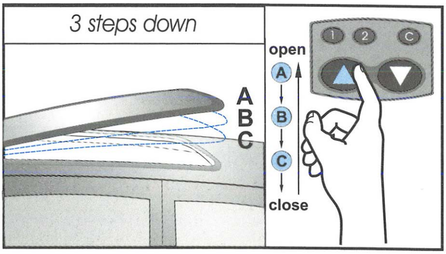
Note: A Jamming Protection facility becomes active whenever the sunroof is closed manually or automatically. If the panel encounters an obstacle while closing, it will immediately open again. The sunroof will continue to try and close until the obstacle has been removed.

Tilting the sunroof

The sunroof panel may be tilted to three different tilt positions (A, B and C) as shown.

To tilt the sunroof fully to the A position, from the closed position, press the ▼ button briefly (maximum 0.3 second). Press the ▲ button once and hold for each tilt level (B and C), to achieve the desired position.


Totally up


3 steps down

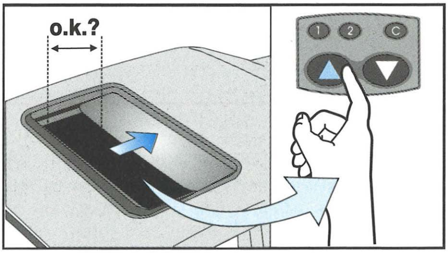
SUNROOF (if fitted) cont.

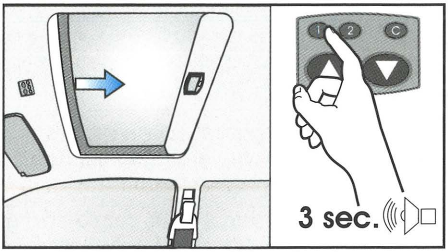
Preset sunroof positioning

The sunroof may be programmed to stop at either of two preset positions (❶ and ❷) automatically.

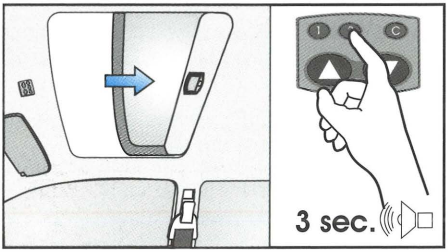
To program preset positions:

1. Place the panel in the desired position.
2. Push and hold button ❶ for approximately 3 seconds until a beep is heard.
3. Place the panel in the second desired position.
4. Push and hold button ❷ for approximately 3 seconds until a beep is heard.

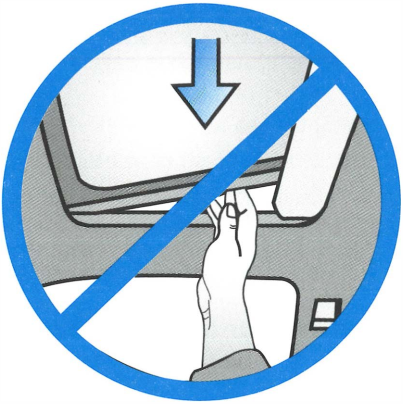




Opening the sunroof using button ❶ or ❷ will stop the sunroof in either preset position as programmed.



WARNING:
The scissor action of the parts when moving may cause serious personal injury and / or may dismember fingers.



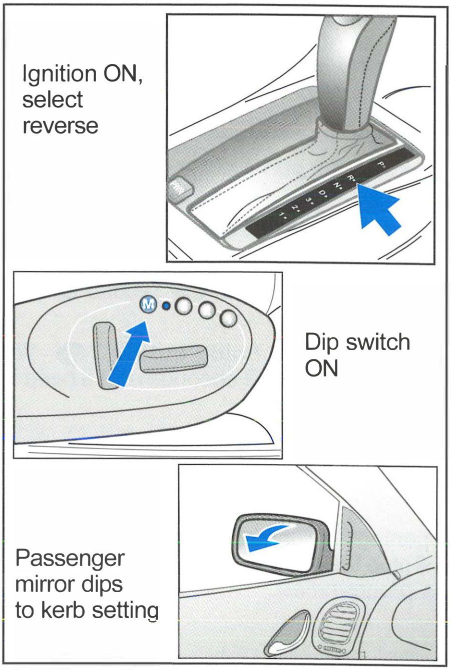
Cleaning and maintenance

The glass panel of your sunroof may be cleaned using a mild, non-abrasive detergent and a moist, soft cloth.

WARNING:
The tinted glass panel of your sunroof is heat and UV resistant. Ensure that due care is taken, and that the above directions are followed when cleaning.

MIRRORS

Exterior mirror DIP (if fitted)



Ignition ON, select reverse

Dip switch ON

Passenger mirror dips to kerb setting

When the transmission selector is moved to Reverse, the external passenger mirror will automatically move to an alternative preset view, for instance down at the kerb.

The DIP system is operational when the ignition is on and Reverse gear is selected. DIP can be turned on (DIP view) or off (normal view) by pressing the DIP / store button (M) on the side of the driver's seat.

- DIP option on, a double chime will sound.
- DIP option off (normal view), a single chime will sound.

While in Reverse gear the passenger's side mirror view can be changed by briefly pressing the DIP / store button (M):

- DIP view to normal view, single chime.
- Normal view to DIP view, double chime.

The next time Reverse is selected the mirror will resume the previously set DIP or normal view.

The alternative (DIP) view is adjustable by the driver. To adjust the DIP view:

1. turn the ignition on,
2. select Reverse gear,
3. ensure that DIP view is switched on (refer above), the passenger's side mirror will move to current DIP view,
4. adjust the mirror with the mirror adjustment switch, then
5. move the transmission selector out of Reverse.
6. press the DIP / memory store button (M) followed by the desired memory button (1, 2 or 3) to also save the DIP mirror position into memory (optional).

The next time Reverse is selected the mirror will move to the new position.

The vehicle remembers the alternative view and if DIP was turned on or off for each ignition key and for each seat memory position (refer previously in this chapter). When the UNLOCK button is used on the vehicle, the vehicle identifies the key and sets the mirror to that driver's preference. Refer also to 'Personal Identity Keys' in Chapter 2.

Heated exterior mirrors (if fitted)

Heating is provided to both external mirrors when the tailgate window demister is switched on.

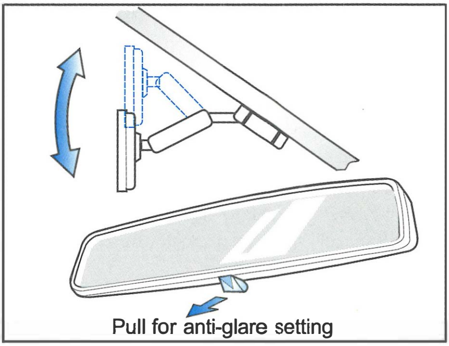
MIRRORS cont.

Internal rear view mirror

Moving the lever on the lower edge of the mirror reduces headlight glare from following vehicles when driving at night.

During daylight driving, the lever should be set forward, away from the driver. At night, flick the lever towards the driver.

Note: Rear view clarity is reduced when the mirror is set to the 'night' position.



External rear view mirror

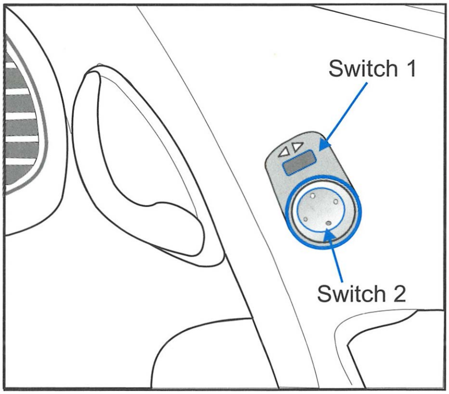
Mirror angle can be adjusted using the switches on the driver's door armrest, when the ignition is turned on.

Rock switch 1 to left mirror, or right mirror.

Press the dot on the edge of switch 2 in the direction you wish the mirror to move. The mirror can move up, down, left or right.

WARNING:

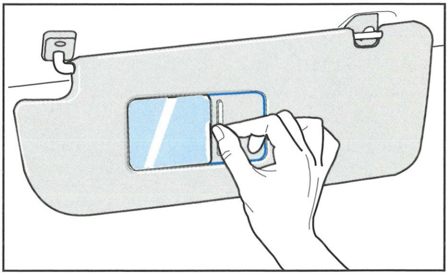
The passenger's mirror is convex shaped, to provide a wider view. Objects seen in this mirror will appear further away than they actually are.



Vanity mirror with cover (if fitted)

On some models, a vanity mirror with a sliding cover is provided on the sunvisor.

Slide the cover to view the mirror.



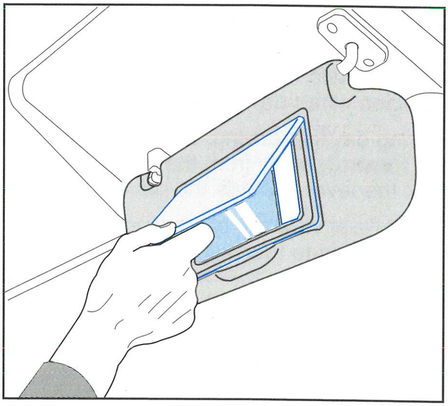
MIRRORS cont.

Vanity mirror with light (if fitted)

On higher luxury model vehicles a vanity mirror is provided on both the passenger's and driver's side sunvisors.

The mirror cover is hinged at the top. To view the mirror, pull the cover up from the lower edge.

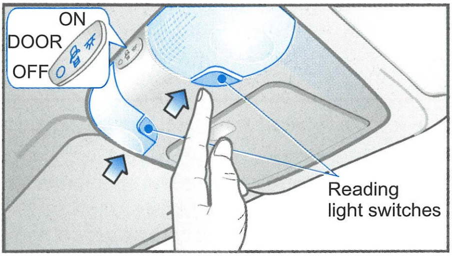
The lights at either side of the mirror automatically turn on and off when the cover is opened and closed.



INTERIOR LIGHTS

Interior (dome) light

The interior light is located in the centre-front of the roof's interior (in the roof console). The interior light can be switched to any of the following positions:



- ☼ (always on),
- 🚪 (door activated), or
- O (always off).

Notes on the door position:

- The light automatically switches on when a door is opened and switches off 30 seconds after all doors are closed. Switching the ignition on turns the light off immediately (unless a door remains open).
- Door is the centre position for the switch.
- For your convenience, the interior light can be set at the instrument panel to remain illuminated for a period of zero to 255 seconds after the ignition has been turned off (refer to Chapter 1, CUSTOMISATION MODE for details about this setting).

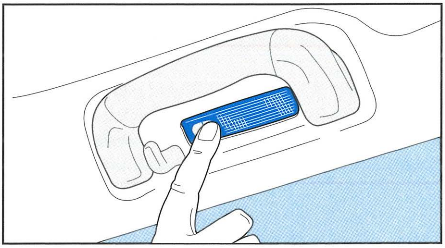
Note: The operation of interior lights is also affected by the Battery Saver and Accessory Control features, refer further on in this chapter for details.

Front reading lights

Front reading lights are incorporated in the interior light assembly, in the roof console. Press the individual switches to turn the reading lights off or on, as required.

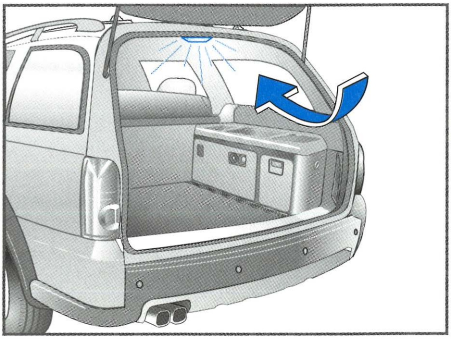
Rear reading lights

The rear reading lights (above the rear doors) may be individually turned to OFF, ON or to DOOR. If DOOR is selected, then they operate in the same way as the dome light.



Rear compartment light

The light illuminates when the tailgate is open and automatically switches off when the tailgate is closed.



ACCESSORY CONTROL AND BATTERY SAVER

Accessory Control

Your vehicle is equipped with an accessory control feature that can be set at the instrument panel to shut down all accessories (radio, power socket, wipers, etc) either when the ignition key is turned off, or when the driver's door is opened (refer to Chapter 1, CUSTOMISATION MODE for details about this setting).

A 1 hour timer will also shut down accessories (radio, power socket, wipers, etc) where the accessory control feature has been set to 'Door Open' or after an accessory has been turned on manually once the ignition is off. For example, if accessory control is set to 'Door Open', and the radio is on, the radio will continue to operate until such time as the driver's door is opened. However, if the door is NOT opened, the radio (and other operating accessories) will be shut down automatically 1 hour after the ignition is turned off.

Note: Operating accessories will NOT be turned off immediately when your vehicle is locked using either the remote locking device or the driver's door key. Accessories are only subject to manual operation, accessory control settings and the 1 hour shutdown timer.

If you want the accessories to continue operating once an automatic shutdown has occurred, you must 'wake up' the system by either manually starting an accessory (e.g. turning the radio on again), or by turning the ignition on and then off again (if accessory control is set to 'Door Open'). These actions will reset the timer to zero. Likewise, if an accessory such as the radio is turned on at any time during the 1 hour period, the timer is reset to zero and all accessories will continue to operate for a further hour. Please note that once an automatic shutdown has been activated (i.e. ignition turned off or door opened), the accessory control setting will no longer be active (i.e. accessories will NOT be switched off by opening the driver door even if accessory control is set to 'Door Open'). To enable accessory control after the system has been reset, you must turn the ignition on and then off again.

Note: The 1 hour shutdown timer only operates if the key is in the lock position (turned off). The timer is not active if the key remains in the accessories or on positions.

Battery Saver

A battery saver feature has also been built into your vehicle to ensure that all internal lights (dome, reading, foot well, ignition, door, glovebox and boot) will switch off automatically after 1 hour to discourage depletion of your battery.

The battery saver will activate when there have been no lights or accessories turned on for 1 hour after the ignition has been switched off.

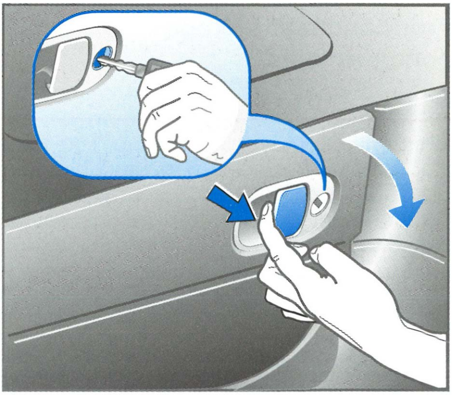
Once the interior lighting system has been shut down by the 1 hour battery saver, it can be 'woken up' by a number of actions, such as turning the ignition on, unlocking the vehicle, or opening the tailgate, etc. Once the system is awake, the 1 hour battery saver time resets to zero and interior lights will continue to operate for a further hour, or until the vehicle is locked.

The interior lighting system will shut down 10 seconds after your vehicle is locked using either the remote locking device or the driver door key. However, please note that if an interior light (such as the dome light) has been turned on manually and is illuminated at the time the vehicle is locked, the lighting system will NOT shut down after the usual 10 seconds; the 1 hour battery saver will be activated instead.

Hazard Lights Note: Hazard lights are not subject to either the accessory control or battery saving devices. They will continue to operate outside the 1 hour timed shutdown that applies to other interior lights and accessories, and also in all ignition key positions (on, accessories and lock).

GLOVEBOX AND CENTRE CONSOLE

Glovebox



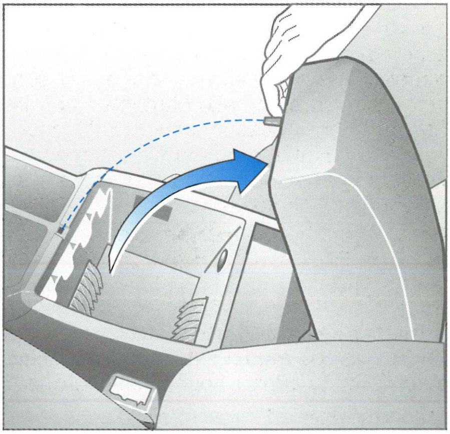
The glovebox is located in the dashboard directly in front of the passenger seat.

A specific key is provided solely to lock and unlock the glovebox. For security, the master key is not designed to operate the glovebox lock. Refer to page 2-2 for more information about keys.

To lock, insert the glovebox key, turn it clockwise and then withdraw. To unlock, insert the glovebox key and turn it anticlockwise.

To open the glovebox, pull the left side of the catch towards you. To close, push the lid firmly back into place.

Centre console



The front armrest opens into a storage area. To open, press the latch (if fitted) on the underside of the front lip and lift the lid to a near vertical position.

Note: The console lid should not be forced further backwards.

The rubber lining inside the console has been designed to hold CDs, coins and a pen. It also provides space to accommodate a standard mobile telephone / charger which may be plugged into the power socket located inside the console (refer to ‘Power socket – cente console’ further on in this chapter for details).

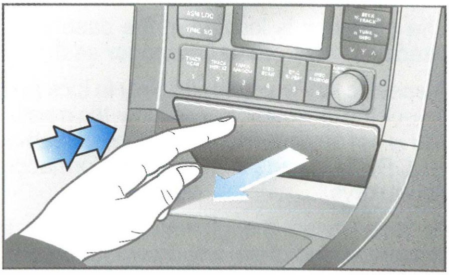
STORAGE COMPARTMENTS

Front and rear storage compartments

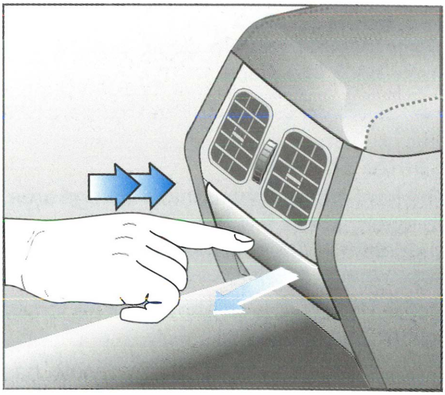
All vehicles are built with storage compartments, front and rear, which are fitted with a 'push-push' cover. The front storage compartment is located beneath the radio system, and the rear storage compartment is at the rear of the centre console.

The storage compartments can be replaced, if required, by an ashtray assembly (refer further on in this chapter).

An open storage bin is also provided beneath the main front storage compartment (or ashtray) to accommodate coins and other small objects.



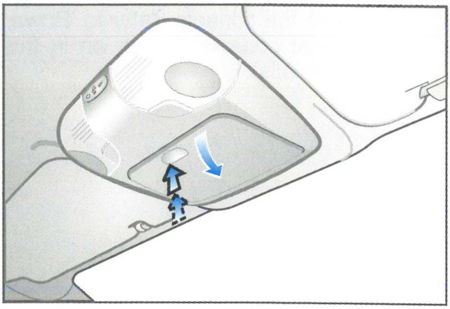
Front storage compartment (if fitted)



Rear storage compartment (if fitted)

Sunglasses holder

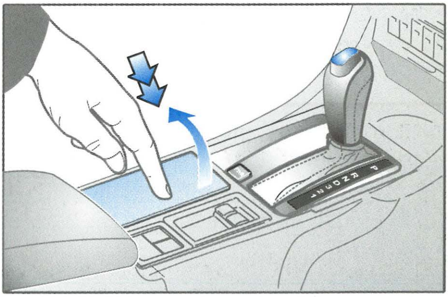
The sunglasses holder is located centre-front of the roof's interior. It is designed to accommodate one pair of sunglasses and uses a push-push mechanism for opening and closing. Push once on the surface of the cover to open the sunglasses holder, then push once again to close it.



STORAGE COMPARTMENTS cont.

Telephone storage

A removable telephone storage tray fits above the cup holder bin (refer further on in this chapter), forward of the centre console. The telephone storage area, provided with higher luxury model vehicles, is fitted with a 'push-push' lid which may be opened or closed by pushing once on the lid surface.



Load area storage compartments

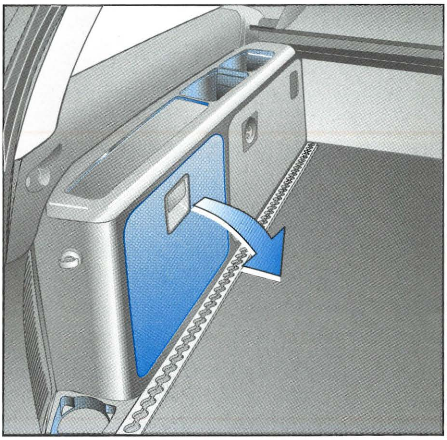
Two removable storage compartments are located in the rear storage area. These compartments are opened by pulling up on the handle and lifting out the compartment lid.

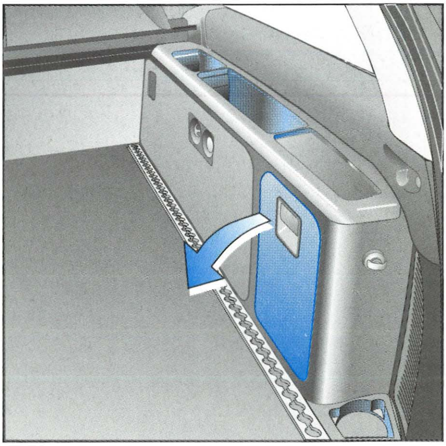
The convenience net and tiedown rail anchors are also housed in these compartments. (See Chapter 10, Tow and load, for more details.)

The compartment lids should be replaced before driving to make sure the stored items are secure.

Cup and bottle holders are also supplied in the rear storage area.

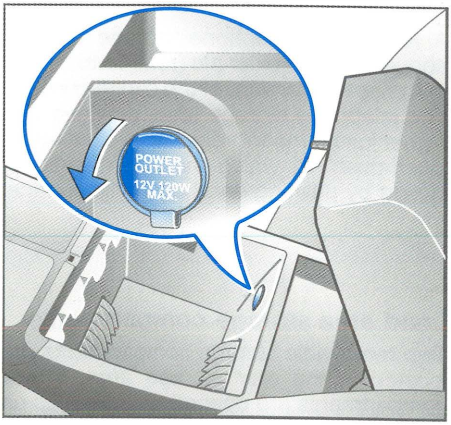
Note: Depending on the vehicles luxury level, the left-hand storage compartment may be replaced with a speaker.





POWER SOCKETS

Power socket – centre console



All vehicles have a power socket located inside the centre console.

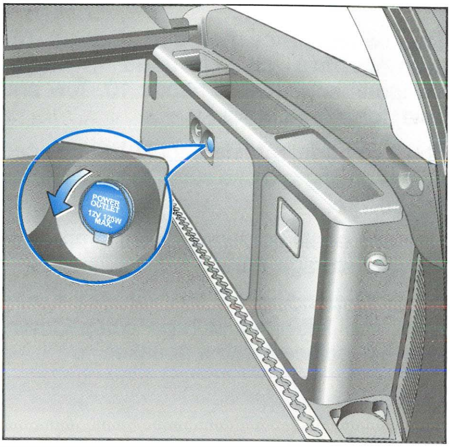
The power socket is operational when the ignition is turned to either on or accessories.

Note: Any accessory device (mobile phone, car fridge, etc) connected to the power socket must not exceed a current draw of 10 amps.

WARNING:

It is dangerous for the driver of a vehicle to attach or remove accessories from the power socket whilst driving. It may distract the driver's attention, putting the occupants of the vehicle and other road users at risk.

Power socket – rear storage area



All vehicles have a power socket located inside the rear storage area.

This power socket is operational at all times, regardless of the ignition switch position.

Note:

- Any device left connected to this power socket will continue to draw current from the vehicle's battery even when the vehicle is switched off and locked. This may cause the vehicle battery to run flat if the device is left connected for extended periods.
- Any accessory device (mobile phone, car fridge, etc.) connected to a power socket must not exceed a current draw of 10 amps.

ASHTRAY AND LIGHTER

Ashtray and lighter option

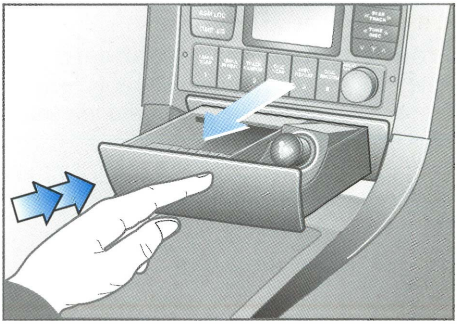
If required, your vehicle can be fitted with an ashtray and lighter instead of front and / or rear storage compartments.

Your Holden Retailer can order and fit the ashtray and lighter for you.

Ashtray (if fitted)

The ashtrays are fitted with a 'push-push' cover. To use the ashtray, push the cover inwards and the ashtray will simply slide open.

The ashtray may be removed for cleaning. To do this, open the ashtray and then grip the receptacle at the finger depressions located on each side. Then simply pull the receptacle out.



Cigarette lighter (if fitted)

The cigarette lighter is housed inside the ashtray assembly and can be operated whenever the ignition is turned on. Press in the lighter knob; when the element is hot, the lighter automatically pops out and is ready for use.

Note: The cigarette lighter should not be used as a power socket. Use the power socket provided inside the centre console.

CUP HOLDERS

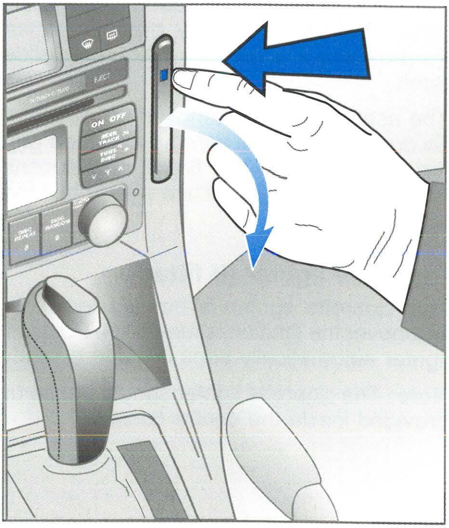
WARNING:

- Do not forget full cups when accelerating and braking! To avoid spillage, it is recommended that any cups placed in the holders have lids.
- Cup holders are designed for holding standard size soft drink cans and smaller size bottles. Larger drink bottles or cups should not be forced into the cup holders, or they may become jammed.

Front cup holders – dashboard

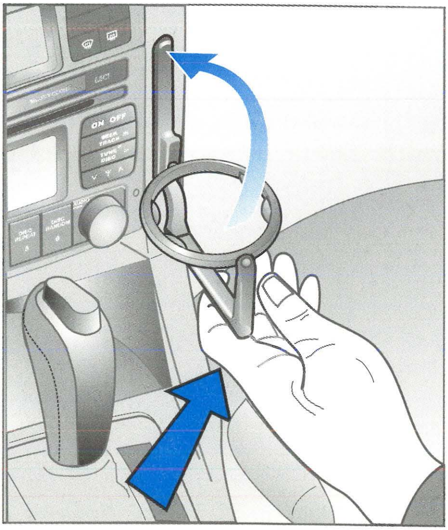
AWD wagons are fitted with cup holders that are stowed in the dashboard, on either side of the radio.

To open, push once on the surface of the cup holder mechanism as shown.

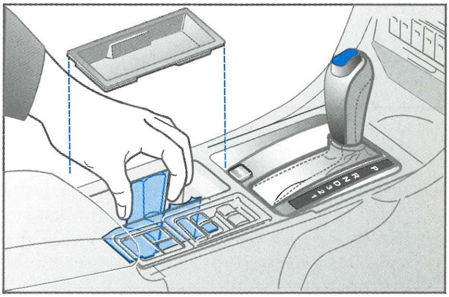


To close, gently raise the cup holder from beneath its base and push it back into the stowed position as shown.

Note: The circular rim of the cup holder rotates automatically to the open (horizontal) or closed (vertical) positions, as required.



CUP HOLDERS cont.



Front cup holders – centre (if fitted)

The centre cup holders are located forward of the centre console. The cup holder bin may be covered by a telephone storage tray (if fitted) which is removable to allow access to the cup holders.

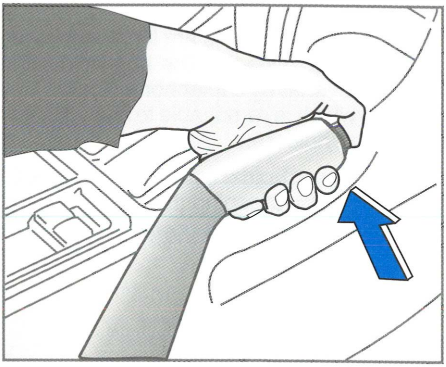
The rubber cup holder lining can be removed for cleaning by grasping the centre point of the lining and pulling it upwards.

PARK BRAKE, FOOTREST, ASSIST GRIPS AND FUEL FILLER RELEASE

Park brake

The park brake lever is located between the front seats.

- To apply, pull the lever straight up, without pressing the release button. To release, pull the lever slightly upwards, push in the release button on the end of the lever and whilst pressed, lower the lever all the way down.
- When the ignition switch is turned on, a symbol on the instrument panel indicates that the park brake is applied.
- NEVER drive the vehicle with the park brake applied.
- If you attempt to drive off without releasing the park brake a warning chime will be heard.

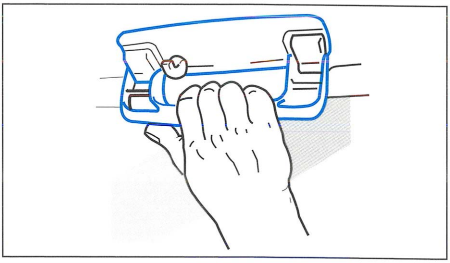


Footrest

The footrest for the driver's left foot is adjustable to three positions. First remove the caps and undo the two screws on the right hand side of the footrest. Move the footrest forward or backward as required, then replace the screws. See your Holden Retailer for assistance with this adjustment if necessary.

Assist grips

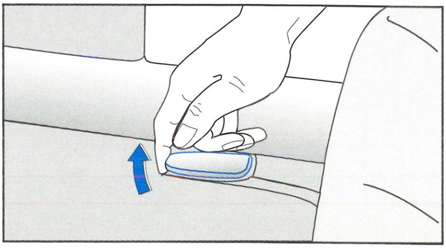
Assist grips are provided above the doors. When released, they will spring back into their stow position against the roof.



Fuel filler release

Pull up the release lever on the floor, to the right of the driver's seat to open the fuel filler cover.

Refer to Chapter 5 when refuelling.



CHAPTER 4

Driving

Page

4-2 Safety
4-3 Engine starting
4-4 Automatic transmission
4-7 Anti-lock brake system
4-8 Traction control
4-9 Driving precautions
4-12 Add on equipment

SAFETY

Before entering the vehicle

1. Check that windows, mirrors and lights are clean.
2. Visually check tyre inflation (check with a pressure gauge each week).

Before driving off

1. Be sure that all doors are closed and secured.
2. Position your seat for comfortable driving.
3. Adjust rear vision mirrors.
4. FASTEN SEAT BELTS.
5. Check that all the warning indicators light up when you turn the key to start the engine, refer to Chapter 1.

Parking

1. Apply the park brake.
2. Place the transmission selector in Park.
3. Shut all windows.
4. Turn ignition key to Lock and remove the key.
5. Lock all doors by pressing the LOCK button on the key when outside the vehicle.
6. Engage deadlocking, refer to Chapter 2.

Note: The engine fan may keep going for several minutes after the ignition has been turned off. This is normal.

WARNING:

Be careful where you park or drive. As with any vehicle, do not park or operate this vehicle in areas where combustible materials such as dry grass or leaves can come in contact with a hot exhaust system.

Never leave the engine running in an enclosed space such as a closed garage or underground car park.

Additional underbody protection

For owners who frequently use their vehicles on rough roads, an under body protection plate which provides full length coverage of the engine and transmission oil pans is available through your Holden Retailer.

ENGINE STARTING

1. Ensure the park brake is firmly applied and release it only after you have started the engine and are ready to drive off.

2. Move the shift lever to Park or Neutral position. The engine will not start if it is in any other position.

3. Start the engine as outlined below (with your foot off the accelerator).

For cold or hot starting the procedure is the same. Simply turn the key to the start position and release when the engine starts.

Note: You do not have to press the accelerator pedal prior to, or during, starting. Pressing the accelerator pedal will only increase cranking time and will not help the engine to start.

You should not subject the engine to high load conditions such as full throttle acceleration or high speeds until it has completely warmed up otherwise you may cause premature engine wear or engine damage.

Engine will not crank or start

- Press and release the unlock button on the key and try starting the engine again.
- Never press the key buttons while cranking the engine.
- Remove the key from the ignition, re-insert the key and try starting the engine again.

Flooded petrol engine

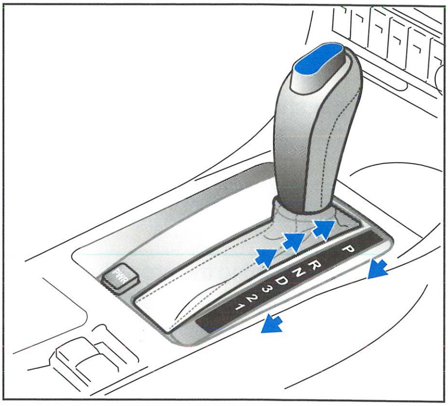
Cranking the engine for a lengthy period without it starting could result in flooding (too much fuel injected into the engine). If this occurs, press the accelerator down to the floor and hold it there while holding the key in the Start position.

When the engine starts, allow the accelerator pedal to come up slowly.

AUTOMATIC TRANSMISSION

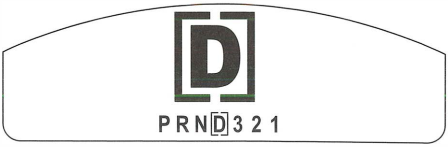
Floor mounted shift

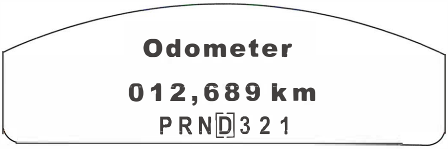
Push in the button on top of the transmission selector lever when shifting into any position indicated by the blue arrow.



When the position of the transmission selector is changed, a large symbol is illuminated on the instrument panel centre display in conjunction with the PRND321 constant icon at the bottom of the display. The brackets around the gear letter move according to what gear is selected on the gear selector.

The large symbol remains for 2 seconds after the gear is selected. While the square around the smaller constant icon moves in conjunction with the selector as it passes through the gear positions.





Note: If any warnings are active on the display, the large symbol will not been shown and only the bracketed constant icon at the bottom of the display changes when the selector is moved.

WARNING:

- Do not press the accelerator pedal with the brakes on in either 1, 2, 3, D (drive) or R (reverse). This will overheat the transmission.
- Do not use the accelerator pedal to hold the vehicle on a slope. Use the brakes.
- Do not coast the vehicle in N (neutral) – this lessens your control and you may need to accelerate quickly in an emergency.

Note:

- Refer to Chapter 7 when checking automatic transmission fluid level.
- The engine will not start unless the selector is in Park or Neutral.

AUTOMATIC TRANSMISSION cont.

Power / normal / cruise mode

The transmission operates in three modes: Power, normal and cruise.

Power mode has revised automatic transmission shift points, to give the vehicle a more responsive feel.

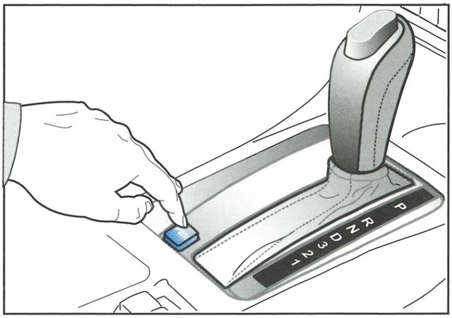
Normal mode is recommended for normal or freeway driving, as it gives better fuel economy.

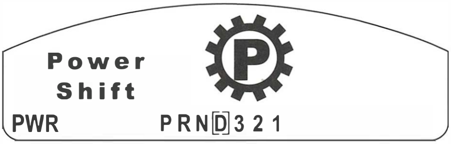
Cruise mode is active when the cruise control is maintaining the vehicle speed. The transmission overrides the power / normal selection and operates in cruise mode, providing optimum driveability. Cruise mode is neither a power or normal pattern and the PWR icon switches off when the cruise control is maintaining vehicle speed.

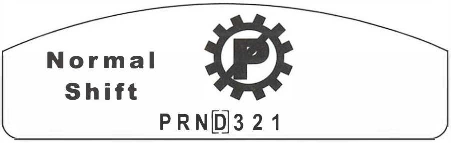
The PWR button is located on the passenger's side of the centre console, next to the transmission selector. Press the PWR button to place the transmission in power mode. Press the PWR button again to select normal mode.

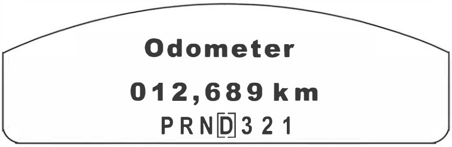
The 'Power Shift' animated symbol and small PWR icon displays when power mode is selected. After 2 seconds the animated symbol reverts to the original trip computer display with a small PWR icon on the left.

When normal mode is selected (power mode off), the PWR icon extinguishes immediately and the 'Normal Shift' animation is displayed. After 2 seconds the animated symbol reverts to the original trip computer display.









Personal identity keys on higher luxury levels: when the key is inserted in the ignition and turned on the system identifies the key and sets the power / normal selection to the last adjustment used for that key. Also refer to 'Personal identity keys' in Chapter 2.

AUTOMATIC TRANSMISSION cont.

P (park)	This prevents the rear wheels from turning and so should be selected (together with the park brake) when leaving the vehicle. Never select P while your vehicle is still moving. The engine can be started in this position.
R (reverse)	Never select R while your vehicle is still moving. Reverse lights will operate when R is selected and the ignition is on. After reversing, make sure the vehicle has fully stopped before selecting another gear position. After selecting R, pause for a moment before accelerating, to allow the transmission to 'engage' reverse gear.
N (neutral)	This is the out-of-gear position. You may then start a stalled engine while the vehicle is still moving or stopped.
D (drive)	This is the most effective position for normal or freeway driving. The drive position gives maximum fuel efficiency, as the transmission can choose the appropriate gear (1 through to 4) for the existing load and driving conditions. After selecting D from P or N, pause for a moment before accelerating, to allow the transmission to 'engage' the forward gear. Use this position, together with the PWR mode when towing.
3 (third)	Third is most effective when overtaking and gives responsive acceleration and deceleration, especially in hilly areas. This position allows the transmission to shift between first, second and third gear as conditions require. Drive (4th gear) is excluded.
2 (second)	Use this position when going down a moderate gradient where you want to slow down a little with minimal use of the brakes. The transmission shifts to first or second gear as required. Move the lever back into the drive position to return to normal driving.
1 (first)	Use this position when strong braking effect is needed on a steep gradient, below 60 km/h. Even though the transmission gear selector may be in 1, the transmission does not select first gear until vehicle speed is less that 55 km/h. Take extreme care when selecting 1 if towing a trailer or caravan on a steep incline. Even though the transmission gear selector may be in 1, the transmission upshifts automatically to second gear at about 5400 rpm. Remember to move the lever back to drive position so that the transmission again upshifts into higher gears.

ANTI-LOCK BRAKE SYSTEM

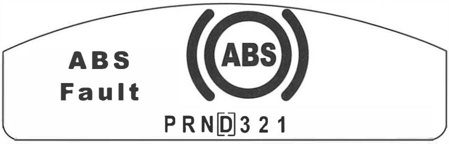
The Anti-lock Brake System (ABS) is in addition to your vehicle's normal brake system. It prevents the wheels from locking up when braking, irrespective of the road conditions and tyre grip. It starts to regulate the braking as soon as a wheel shows a tendency to lock. The vehicle remains steerable, even in the event of panic braking, for instance on bends or when swerving to avoid an obstacle.

Maximum braking is provided for each wheel, up to the point where it would lock. This means that steering control is retained.

In an emergency braking situation, the driver should keep full force on the brake pedal, without 'pumping' the brake pedal. 'Pumping' the brake pedal can reduce brake efficiency when ABS is controlling the braking.

DO NOT let this special safety feature tempt you into taking risks when driving. Traffic safety can only be achieved by adopting a responsible driving style. Your speed should always be adjusted to suit road and traffic conditions.

The instrument panel provides an ABS Off warning light below the temperature gauge and an 'ABS Fault' animation via the centre display. To check that the bulb is working, the (ABS) warning light comes on for a few seconds when the ignition is turned on. If the (ABS) warning light and 'ABS Fault' animation illuminate when driving, a malfunction of the Anti-lock Brake System is indicated and you should see your Holden Retailer. The vehicle's brake system will still operate conventionally, only the anti-lock operation is impaired.



The 'ABS Fault' animation is displayed until the MODE button on the trip computer switch is pressed. Whereas, the (ABS) warning light will remain illuminated until the problem is rectified.

When your vehicle is in a critical braking condition ABS makes itself noticeable through pulsing of the brake pedal and the noise of the regulation process, thereby reminding you to match your speed to the road conditions, even though it is keeping control of the braking.

The ABS system performs a self check each time the vehicle is driven. This can sometimes be heard as well as felt, as pulsing, through the brake pedal.

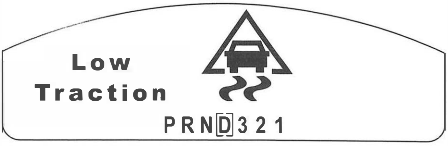
TRACTION CONTROL

Automatic Brake Differential (ABD) helps prevent the driving wheels (front and rear) from spinning. As soon as even one driving wheel starts to spin ABD applies the brakes, as necessary. This improves the vehicle's stability, particularly on snow and ice, as well as on wet or slippery roads.

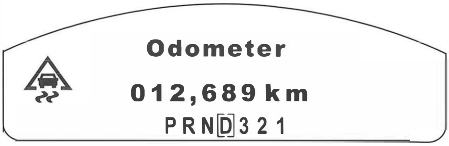
ABD automatically helps you to keep control of the vehicle and reminds you to match your speed to the road conditions.

Note: Do not let this special safety feature tempt you into taking risks when driving. Traffic safety can only be achieved by adopting a responsible driving style.

The 'Low Traction' animation on the instrument panel centre display illuminates when ABD is controlling wheel spin, indicating that the vehicle is now in a critical situation.



The 'Low Traction' animation displays until the MODE button on the trip computer switch is pressed. The animated symbol then reverts to the original trip computer display with a small low traction symbol on the left. The symbol remains as long as the low traction situation exits.



ABD is automatically turned on whenever the ignition is turned from off to on.

There is no switch provided to turn the ABD function off. The ABD system has been developed to provide optimum traction for all types of road surface.

DRIVING PRECAUTIONS

Running-in

These days, there is no need to follow a formal running-in schedule. However, by observing a few simple precautions during the first few hundred kilometres of driving you will greatly assist your vehicle's future performance and economy.

For the first 500 kilometres avoid using heavy acceleration.

Up to 1500 kilometres avoid driving at any one speed, either slow or fast, for any length of time. Therefore, avoid using the cruise control while 'running-in'. However, include some higher speeds during this period. Always drive at moderate speed until the engine has completely warmed up.

It is best to drive your new vehicle for 1500 km before towing a load. If you must tow before this do not exceed 80 km/h. The same applies if you have a new or reconditioned engine, transmission or rear axle.

Engine misfire

Reduce speed and do not tow a caravan or trailer until the misfiring is corrected at the nearest Holden Retailer. Otherwise, the catalytic converter and exhaust system may overheat, resulting in vehicle damage.

Brakes

The power assisted brakes fitted to your vehicle use vacuum from the engine when it is running. Therefore, never let the vehicle run down hills with the engine off, or coast after switching the engine off.

Your seat should be positioned so that you can push the brake pedal easily. Nothing should be under the brake pedal which could limit pedal travel, for instance, poorly fitting floor mats.

Consistent, heavy use will shorten the life of the brake pads.

Power steering

The power assisted steering fitted to your vehicle has been designed to reduce steering effort. Care should be taken not to hold the steering wheel fully turned when stationary (for example, when waiting before turning a corner, etc.) as this creates high operating temperatures and pressures within the system.

If power assistance for the steering is not working, due to the engine stalling etc., the vehicle can still be steered. However, due to the much greater effort required to steer, it is recommended that you have the problem fixed promptly.

Loading the vehicle

Loading the vehicle changes the mass distribution and therefore the handling when driving. After loading the vehicle, extra care should be taken to become familiar with the vehicle's driving feel, refer to Chapter 10, 'Tow and load'.

DRIVING PRECAUTIONS cont.

Loose articles

Do not leave loose articles or luggage in the passenger compartment. Whenever possible, firmly secure articles in the rear storage area using the storage compartments, convenience net or tie-down straps.

WARNING:

Gas cylinders can leak, creating a risk of fire or explosion. As a precaution, ensure adequate ventilation when carrying gas cylinders. They must be restrained from rolling around, and where possible, placed in the load area of the vehicle. It is recommended that if gas cylinders are frequently transported that a purpose-built carrying compartment be used. Transportation of gas cylinders is regulated by legislation in some states.

Mobile phones and CB radios

Mobile phones and CB radio equipment, which use an integrated antenna, may temporarily affect the vehicle's electronics (permanent damage is unlikely) when used inside the vehicle, due to the interference created when transmitting.

Therefore, mobile phones and CB equipment that use an antenna fitted to the outside of the vehicle should be used whenever possible.

If phones or CBs with an integrated antenna must be used inside the vehicle, avoid using near the dashboard area, as some functions may be affected.

Difficult conditions

Where there is any doubt as to whether the road is passable, it is better to stop the vehicle well before the hazard and check on foot before driving the vehicle through it.

When driving in extremely muddy or sandy conditions, it is highly advisable to carry a piece of timber approximately 300 mm in diameter and 20 mm thick to act as an auxiliary base for the vehicle jack if jacking the vehicle on soft ground.

If the ground is very uneven or rocky, do not grip the steering wheel with your thumbs around the rim of the wheel. A sudden steering kickback due to an unseen obstacle could cause injury to the thumb.

Ensure that all luggage and equipment is securely tied down when driving over rough or uneven surfaces.

Water crossing

Before crossing water it is recommended that air conditioning be switched off.

If it is necessary to drive through deep water, check the depth with a stick or by wading into the water before driving through. Do not attempt to drive through water more than 300 mm deep (approximately 12 inches). Always drive through deep water very slowly, as too high a speed will make a bow wave that may cause water to enter the engine through the inlet system and cause major damage. Never drive into fast running water. The force of the water can easily move the car sideways, possibly into deeper water.

Always check the brakes for effectiveness immediately after driving through deep water. Drive slowly and check the pedal force. If the brakes are wet, several firm brake applications will dry them out quite quickly.

If the vehicle is stationary in deep water for an extended period, it should be checked by an authorised Holden Retailer as soon as practicable for water entry to engine, transmission, differentials and wheel bearings.

DRIVING PRECAUTIONS cont.

Tyre grip

A decrease in tyre grip occurs when water, snow, ice, gravel or other materials are on the road. Driving speed should be adjusted to the road conditions.

When driving on wet or slushy roads, it is possible for a wedge of water to build up between the tyre and road surface. This phenomenon, known as hydroplaning, may cause partial or complete loss of grip, which affects steering and braking. To reduce the possibility of hydroplaning:

- Reduce speeds during rainstorms.
- Replace tyres when tread wear indicators are visible.
- Regularly check that tyres are properly inflated.

When driving on dusty roads, a build up of dust accumulates on the inner surface of the rear wheel rims. When your vehicle stops the dust from the top of the rim may fall to the bottom, creating an out of balance condition which can cause noticeable shake or vibration in the vehicle at speeds over 80 km/h. If the vibration is objectionable, the dust will need to be removed from the inner rims with a scraper or similar.

Driving in sand or mud

A method often used to increase traction in soft sand is to lower the tyre pressures to approximately 100 kPa (15 psi). To prevent serious damage to the tyres the vehicle must be driven at low speed, and the tyres reinflated to the correct pressures at the first opportunity.

If the vehicle is bogging down, do not keep spinning the wheels, otherwise the vehicle will dig itself in until the underbody rests on the ground. As soon as the vehicle stops, attempt to reverse out of the situation. Digging sand out from in front of or behind the wheels can provide a ramp to allow your vehicle to get started. Sometimes rocking the vehicle back and forth in first and reverse gears can build up enough momentum to free the vehicle.

Steep downhill driving

Shift the transmission selector lever to 1st gear. Utilise the engine braking effect to slow your vehicle, and keep braking to a minimum to retain steering. The anti-lock brake system of your AWD wagon does not operate below 5 km/h, so it is possible to lock the front wheels below this speed and lose steering unless the brakes are used very gently.

Note:

- Your vehicle should not ascend or descend any slope greater than 50% (30 degrees).
- Your vehicle should not exceed 40 km/h at a lateral angle greater than 40% (24 degrees).

ADD ON EQUIPMENT

Snow and ice

Extreme caution must be used when driving on ice or packed frozen snow. The level of tyre grip is extremely low, and sudden steering inputs or brake applications can cause loss of control. All steering and braking should be done very slowly and gently, and vehicle speed kept low. Allow a generous braking distance if following another vehicle.

When parking your vehicle overnight or longer in freezing conditions, cover the windscreen with newspaper to stop ice forming on the glass. Lift the wiper blades clear of the windscreen to stop them freezing to the glass. Note that extreme cold hardens the wiper blade rubbers, so they may not be fully effective.

When driving in sub zero conditions, use the demister to direct hot air on to the windscreen to stop ice forming on the outside when driving.

Snow chains

Tyre chains may only be fitted to the rear wheels of your vehicle. Ensure the chains are fitted correctly and that loose ends are secured to prevent body panel damage. Travel at slow speed (maximum of 20 km/h) with chains fitted.

Any valve extensions should also be removed.

Snow chains should only be used for short distances if the roads are not snow covered. The hard road surface causes rapid wear and the chain may break.

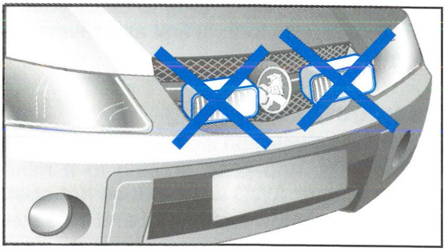
Snow chain links should not be thicker than 13 mm and the clasp should be well away from the bodywork. Thicker chains may damage the vehicle body.

Ensure that tyre pressures are as recommended on the tyre placard.

Fitting driving lights, insect screens

When fitting these accessories be careful not to restrict air flow otherwise engine overheating and / or poor air conditioning performance may result.

Nothing should be fitted over the upper or lower air intakes at the front of the vehicle, as this could affect engine cooling.



NOTES

CHAPTER 5

Fuel

Page

5-2 Fuel
5-4 Emission control
5-5 Reducing fuel consumption
5-6 Measuring fuel consumption

WARNING:
The AWD wagon has NOT been designed for conversion to LPG. The performance and safety of the vehicle would be seriously jeopardised (refer also to 'Traction control' in Chapter 4).

FUEL

EXHAUST WARNING – CARBON MONOXIDE POISONING

Exhaust gases can produce carbon monoxide, a dangerous gas, which can cause unconsciousness and even death to both humans and animals.

You could inhale the gases if the exhaust system on your vehicle is faulty.

To protect against exhaust gases entering the vehicle, the exhaust system and body should be inspected:

- each time the vehicle is serviced,
- whenever a change is noticed in the sound of the exhaust system,
- whenever the exhaust system, underbody or rear of the vehicle is damaged.

Take the vehicle to your Holden Retailer if you think your vehicle needs inspecting for any of the above reasons.

DO NOT SIT (OR LEAVE CHILDREN OR PETS) IN A PARKED VEHICLE FOR ANY EXTENDED PERIOD OF TIME WITH THE ENGINE RUNNING. DO NOT RUN THE ENGINE IN AN ENCLOSED AREA (SUCH AS THE GARAGE) ANY LONGER THAN IS NEEDED TO MOVE THE VEHICLE.

Driving with the tailgate open is not recommended. If you must travel with the tailgate open, close all windows, ensure that the heater controls are set to outside (rather than recirculate) with air directed to the face and the fan on the highest speed. Do not exceed 50 km/h.

FUEL WARNING:

- Petrol is extremely flammable and highly explosive.
- Always turn off the engine of your vehicle and any mobile phones when refuelling.
- Do not smoke or allow open flames or sparks near the vehicle when refuelling.
- If petrol fumes are smelt while driving, the cause should be found and corrected without delay by a Holden Retailer.

WARNING – USE OF FUEL CONTAINING ETHANOL:

When purchasing such fuel, we recommend that your vehicle be operated on fuel containing no more than 10% ethanol. Purchasing your fuel from a reputable fuel retailer may reduce the risk of purchasing fuel with more than 10% ethanol or fuel which contains abnormal fuel properties. Under no circumstances should you use fuel containing more than 10% ethanol. Use of such fuels may result in engine malfunction, starting and operating difficulties, and materials degradation. These adverse effects could result in permanent damage to your vehicle and personal injury. It is also important to note that when ethanol blends are used, fuel consumption can be expected to increase due to the lower energy content of ethanol.

The use of any fuel, other than the fuel specified on the following page, may seriously damage your vehicle and may void your Warranty. Only clean fuel of good quality should be used.

The use of fuel containing more than 10% ethanol may also affect your New Vehicle Warranty to the extent that Holden considers that the fuel affects the specifications and quality of your vehicle.

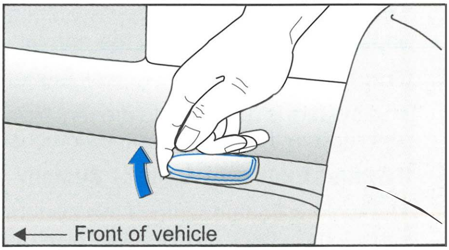
FUEL cont.

Petrol – general

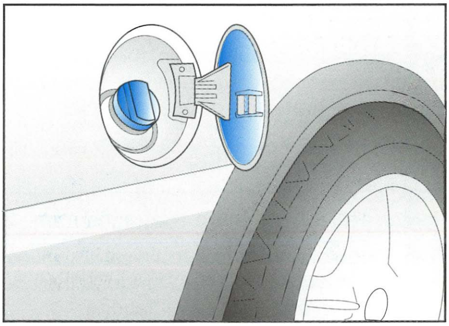
Petrol tanks should always be filled at the intermediate or fast fill rate. Do not add any more petrol after the petrol filler first clicks off or petrol blows back – as this allows room for the petrol to expand inside the tank. It is only permissible to 'trickle fill' petrol tanks when the vehicle is to be driven for more than 50 km straight after the tank is filled. However, this is not recommended on days over 30°C. Wipe off any overflowing petrol immediately from the vehicle; spray or splash with water (replace the petrol cap and close the fuel opening before spraying with water).

Fuel filler flap release

Pull up the release lever on the floor (to the right of the driver's seat) to release the fuel flap.



Open the fuel flap from outside the vehicle.



Petrol cap

The petrol cap (under the fuel flap) is a screw-on, ratchet type. After refilling, tighten the cap clockwise until a clicking noise is heard and then close the fuel flap.

Tank capacity

Your AWD wagon has a capacity of 75 litres.

LPG conversion

WARNING:

The AWD wagon has NOT been designed for conversion to LPG. The performance and safety of the vehicle would be seriously jeopardised (refer also to 'Traction control' in Chapter 4). Refer also to Chapter 9 for information regarding your New Vehicle Warranty.

Fuel octane rating

Use UNLEADED PETROL of 91 Research Octane Number (RON) rating or higher. Higher octane 'Premium' unleaded petrol (95 RON) may be used, but is not required for your vehicle.

EMISSION CONTROL

Your vehicle is fitted with emission control systems which are designed to reduce the amount of hydrocarbons (HC), carbon monoxide (CO), and oxides of nitrogen (NOx) that are emitted from the engine and fuel system into the atmosphere. Hydrocarbons and oxides of nitrogen, when exposed to sunlight under certain conditions, contribute to photochemical smog. In addition, carbon monoxide is toxic when it becomes highly concentrated in the air.

The three major emission control systems fitted to your vehicle are:

1. **Evaporative Emission Control System** (Australian vehicles only)

   This system is designed to prevent the escape of fuel vapours from the fuel system and recycle them through the normal combustion process.

2. **Crankcase Emission Control System**

   This system is designed to prevent blow-by gases from escaping into the atmosphere and recycle them through the combustion process.

3. **Exhaust Emission Control System**

   The various components of this system operate collectively to limit HC, CO and NOx emissions in the exhaust gas. The exhaust Emission Control System is comprised of components including electronic control of spark, fuel and idle speed. In addition, vehicles have a catalytic converter and closed loop mixture control system.

For detailed information on the operation, servicing and repair procedures for these systems, refer to your vehicle's service booklet and / or the emission label inside the engine compartment of your vehicle.

Owner responsibility

Vehicles sold and serviced within Australia have been designed to comply with Australian Design Rules and State Regulation emission requirements.

The engine, engine control system or exhaust system of the vehicle must NOT be modified in any way. Any change to the design may increase the emissions or otherwise defeat the intent of the regulations.

WARNING:

Any person who removes, modifies or hinders any part of the emission control system may be contravening Australian Design Rules, refer A.D.R. 28/01 (External Noise for Motor Vehicles) and A.D.R. 79/00 (Emission Control for Light Vehicles). It is also illegal to drive a vehicle modified in this way.

Maintenance requirements

To ensure continuing compliance with the regulations you must maintain your vehicle’s emission control system as per your vehicle's service booklet, at the frequency shown in the Maintenance Schedule of your vehicle's service booklet which is inside the glovebox of your vehicle.

It is recommended that the necessary servicing be performed by an authorised Holden Retailer who has the specialised servicing equipment and trained personnel available to ensure that the adjustments and services specified are carried out.

REDUCING FUEL CONSUMPTION

Engine

Maintain the engine in peak mechanical condition by having it serviced regularly in accordance with the Maintenance Schedule in your vehicle's service booklet inside the glovebox of your vehicle. This will ensure items such as the spark plugs, air cleaner, engine idle speed, etc, are maintained for minimum fuel usage and peak engine performance.

Tyre pressure

Keep the tyres at the recommended pressures. Under-inflated tyres create extra rolling resistance which contributes to increased fuel consumption, refer to Chapter 7.

Incorrect tyre pressures can also cause uneven and premature tyre wear.

Wheel alignment

Maintain correct front and rear wheel alignment. Incorrect alignment makes the wheels drag, which increases fuel consumption and causes uneven and premature tyre wear.

Warm ups and idling

Avoid long engine warm ups. They are unnecessary and waste fuel. An engine takes approximately 5 minutes to reach its efficient operating temperature and it does this most effectively when driving.

You should also avoid long engine idling. If you have to wait for more than a couple of minutes turn off the engine to conserve fuel.

Accelerating, driving and braking

Accelerate gently and avoid rapid starts. Sudden bursts of speed, full throttle acceleration and hard braking are certain fuel wasters.

Drive the vehicle at steady speeds where possible (after run-in).

Riding the brake

Do not rest your foot on the brake pedal when you do not intend to brake, as this can overheat the brakes, increase brake pad wear, damage the brakes and waste fuel.

Air conditioning

Turn off the air conditioning when not required. However, once every 2 weeks, with the engine running, switch the air conditioner on for 5 to 10 minutes to lubricate seals (even in winter).

MEASURING FUEL CONSUMPTION

Before checking

- Fuel consumption should not be judged until the engine has been 'run-in'. You should wait at least 1500 km before checking fuel consumption.
- Please read information on the preceding page regarding fuel consumption.
- Find a petrol station and petrol pump that will be convenient to use for the next few tank fills. This is necessary due to variations in pumping speeds between petrol pumps and petrol stations.

To check fuel consumption

1. Reset the tripmeter in the trip computer to zero. Refer to Chapter 1 if unsure how.
2. Fill the fuel tank until the petrol pump first clicks off.
3. At the time of the next refill return to the same petrol station and petrol pump.
4. Record the distance travelled on the tripmeter and again reset the tripmeter to zero.
5. Fill the fuel tank until the petrol pump first clicks off.
6. Record the amount of petrol added to the tank from the petrol pump.

Calculating

1. Multiply the amount of petrol by 100, then divide the result by the kilometres driven.

   The answer is the 'litres per 100 kilometres' consumption rate.

   e.g. 43.8 litres used, 476.3 km driven: $\frac{43.8 \times 100}{476.3}$ = 9.2 litres per 100 km

2. Repeat this procedure three to five times, to get an average reading. This will take account of variables such as load, weather conditions and city / highway driving.

CHAPTER 6

Emergencies

Page
6-2 Accidents
- Being involved
- Being a witness
- Medical assistance

6-4 Flat tyre
6-8 Fuses
6-10 Hazard warning flashes
6-11 Engine overheating
6-13 Flat battery
6-15 Airbags
6-18 Bulb replacement

Note: Your new vehicle is covered for 3 years by 24 hour Roadside Assistance. Refer to Chapter 9 for details.

ACCIDENTS

All drivers are advised to learn what to do at the scene of an accident, particularly where people are injured. Injured people can choke to death if their air passages are not cleared, they can bleed to death unless the bleeding is stopped, they may require mouth-to-mouth resuscitation or may have to be moved, even though badly injured. It is important that you understand how to avoid further damage to an injured neck, back or broken limbs. In all cases, ensure safety for rescuers, victims and bystanders.

The following notes may help.

Accident – being involved

If you are involved in an accident, you are advised to do as follows:

- Stop immediately and remember to turn off the engine and apply the park brake.
- Remember that time is vital. Remain calm and alert. Think quickly and clearly.
- Give all possible assistance to all injured persons (refer to page 6-3 'Medical assistance').
- Send for police and ambulance if anyone has been injured. Give information as accurately as possible: the exact location, the number of injured people and a brief report on the overall situation.
- Warn all other traffic approaching the scene. Some models of vehicle are provided with a safety triangle which can be erected ahead of the scene of an accident to warn approaching traffic.
- Turn off ignition switches. Stop any smoking and mobile phone use near spilt petrol. In darkness, try to light up the area to warn others – use hazard lights, a torch or headlights. Do not use flammable items.
- Clear the road of accident debris.
- Exchange your name, address, vehicle registration, owner's name and address with the other parties involved in the accident.
- If damage to property only has occurred, report the facts to the owner of the damaged property or to his / her representative, to any police present at the scene of the accident, or to the nearest Police Station.
- Try to note all important facts because such details may be needed to support any official enquiries made at a later date.

Accident – being a witness

If you witness a road accident or it becomes your task to stop and help:

- Keep in mind that an observant witness can prove most helpful.
- DO NOT stop at the scene of an accident just to be a spectator. If other people are already in attendance and giving assistance, you should only stop if you can contribute assistance.
- Give what assistance you can to any injured persons (refer to page 6-3).

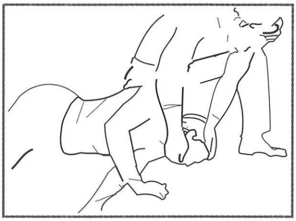
ACCIDENTS cont.

Medical assistance

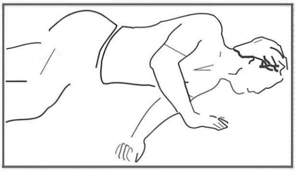
This information is intended only as a guide to basic first aid and may not be applicable in all situations. You should always defer to a trained medical officer or other person with first aid knowledge. Protective equipment, such as rubber gloves are recommended.

Keep calm and think clearly. Your experience may be limited but do your best to assist.

- Look after any unconscious people first. Check their airway, breathing and circulation. If they are not breathing, check if their air passages are clear, i.e. nose and mouth. Use your fingers to clear air passages if necessary. If the air way is clear then mouth-to-mouth resuscitation may be needed at once.
- You must be very careful when moving an injured person. It is best not to move them at all, except if they are in immediate danger. Serious and permanent damage can be done to an injured neck or back if not supported correctly during movement. AVOID BENDING OR TWISTING A NECK OR BACK. KEEP THEM STRAIGHT. Injured limbs also require support when an injured person has to be moved.
    - Unconscious people can choke.
    - Carefully turn them onto one side.
    - Tilt their head back slightly.
    - Wipe out their mouth with your finger to remove any obstructions such as blood, vomit, broken teeth or dentures.



- Provided it is not dangerous to do so because of other injuries, an unconscious person is best placed in the position illustrated here.
    - Lay the person on one side, if it will not aggravate any injuries. Then:
    - Bend the uppermost knee until the thigh is at a right angle to the body.
    - Bend the uppermost arm and elbow so that the hand rests near the face.
    - Gently pull the underneath arm so that it rests straight on the ground, free of any body weight.



- Try to stop bleeding by applying direct pressure to the wound using your hand, or by pressing torn flesh together. Fold any clean cloths available to make pads. If necessary press one pad on top of another. Continue to apply pressure around edges of a wound BUT NEVER USE A TOURNIQUET.
- Shock may be treated by reassuring the injured person, relieving pain, controlling any bleeding and keeping them warm but not hot. It is best not to give any fluids to an injured person and NEVER ALCOHOL.
- If the injured person is in danger and has to be moved, try to have three or four people to help and concentrate on not bending or twisting the neck, spine and injured limbs. Keeping the neck and spine straight is most important.

FLAT TYRE

WARNING:

- Use the jack only for lifting the vehicle when changing wheels.
- Never get beneath the vehicle when it is only supported by the jack.
- Do not start or run the engine while the vehicle is only supported by the jack.
- All passengers should be out of the vehicle when it is being jacked.
- Use the jack only at the designated lifting points. Use in other locations may result in the vehicle falling off the jack, or damage the body of the vehicle.
- If using a jack (or hoist) other than the jack supplied with the vehicle, refer to Chapter 7 for the correct lifting positions.
- The vehicle should only be jacked on hard, level surfaces.

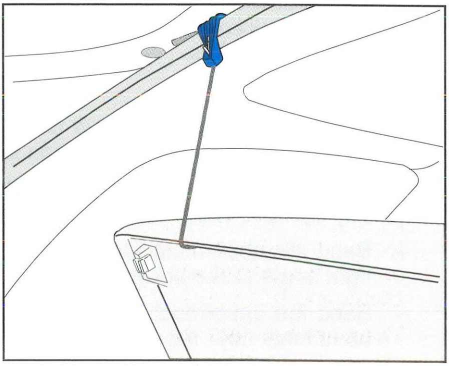
1. Ensure the vehicle is parked in a safe location on flat ground if possible and well away from passing traffic. Turn the hazard warning lamps on.
2. Ensure the transmission shift lever is in the Park position.
3. Ensure the park brake is firmly applied.

   WARNING:

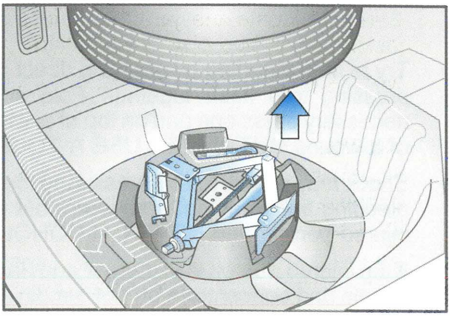
   The hand brake must be ON to ensure safe operation of the jack.

4. Remove the spare wheel and jacking equipment as follows:
   - Open the tailgate. Pull up the floor cover and secure it out of your way with a hook. The hook is provided underneath the cover. Unclip the hook and attach it to the weather-seal.

   Note: Remember to unhook the cover before closing the tailgate.



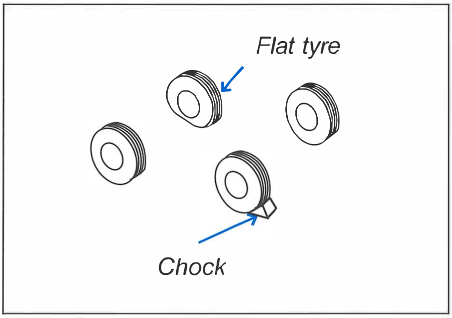
   - Undo the nut or wheel retainer in the centre of the spare wheel and lift the wheel out of the vehicle. Place the wheel near the wheel to be changed.
   - Remove the jack, wheel wrench and chock from the retainer in the spare wheel well.



FLAT TYRE cont.

5. Fold out the metal wheel chock provided and place under the rear of the wheel diagonally opposite to the wheel being jacked.

   Note: If the vehicle is on an incline, the chock must be placed on the downhill side.



6. If the wheel trim covers the wheel nuts, remove as follows:
   - If individual wheel nut caps are fitted, remove each nut cap individually, using the nut cap tool provided. Insert the nut cap tool into the nut cavity, squeeze the tool to grasp the nut cap and pull outwards to remove it. Put the nut caps (together) in a dry, clean place to avoid getting dirt inside the caps.
   - If a centre cap is fitted that covers the wheel nuts, then remove it by using the end of the wheel wrench or your fingers.

7. Loosen, but do not remove the wheel nuts by turning the wheel wrench anticlockwise.

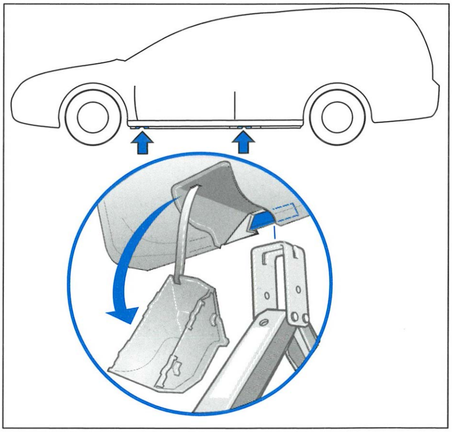
8. Fit the jack handle onto the jack by sliding the open end of the handle over the nut end of the jack.

9. Remove the plastic cover over the jacking point nearest the wheel to be jacked. Pull the cover towards you. The cover is retained by a plastic strap which allows it to hang until refitted.

   There are four jack locations; two each side of the vehicle (blue arrows in the illustration).

   Carefully locate the jack head in the jacking point (see diagram on jack)

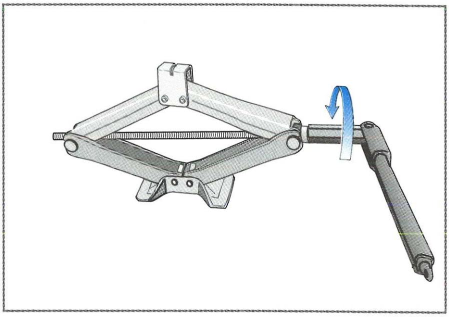
   Note: Always read the label on the jack.



WARNING:

- Failure to position the jack as described above could cause the vehicle to slip off the jack.
- If the vehicle is being used in soft or sandy road conditions, it is strongly recommended that an extra base plate of sturdy material (five ply wood or similar) be carried. Use of the extra base plate will help stop the jack base sinking into the ground as the vehicle is jacked up.

FLAT TYRE cont.



10. Raise the jack to fit the U-shaped lifting foot of the jack around the body of the vehicle, at the jack location.

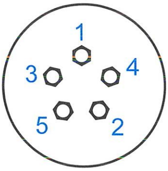
    Ensure that the jack is not tilted and that the base is resting squarely on the ground.

    Turn the handle clockwise to raise and anticlockwise to lower the vehicle.

    Note: The jack handle must be unfolded into a right angle (as shown) before it is used.

11. Raise the vehicle until the tyre is clear of the ground by approximately 20 mm. Remove the wheel nuts and place (together) in a dry place to avoid getting dirt in the threads. Exchange the wheel on the vehicle with the spare wheel.

    Note: You may wish to change the alloy wheel centre cap onto the alloy wheel being put on the vehicle. Remove the centre cap from the wheel that has the flat tyre by gently punching it out from the back of the wheel. Push it onto the spare wheel, now on the vehicle.



12. Replace the wheel nuts and tighten by hand. Then, using the wheel wrench, lightly tighten each nut in the sequence shown.
13. Lower the vehicle completely and remove the jack.
14. Fully tighten the wheel nuts using the wheel wrench in the sequence shown.
15. Replace the individual wheel nut caps over each nut.
16. Refit the jacking point cover and replace the jack, handle and chock in the retainer in the spare wheel compartment with the jack correct side up (refer to instruction on the jack)
17. Carefully place the removed wheel in the spare wheel compartment over the jack retainer.

Note:

- After replacing the jack in its compartment, you must wind it up at the nut end of the jack, to fit correctly into the storage position.
- Remember to unhook the spare wheel cover before closing the tailgate.
- To reduce movement of the spare wheel in the load area, the centre nut should be tightened to between 2 to 3 Nm (Newton metres) (very tight 'finger' tight). The spare wheel should be laying flat and centralised in position.

FLAT TYRE cont.

18. Remember to get the tyre repaired as soon as possible.

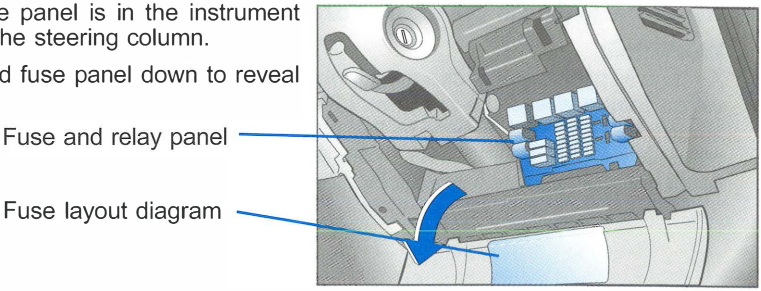
WARNING:

As soon as possible after changing a wheel, you should have the wheel nuts tightened with a torque wrench to between 110 and 140 Nm (Newton metres). Wheel nuts should be tightened evenly to the correct torque in the sequence shown (refer previously in this chapter), as wheel nuts which have not been tightened properly could eventually allow the wheel to come off while the vehicle is moving!

FUSES

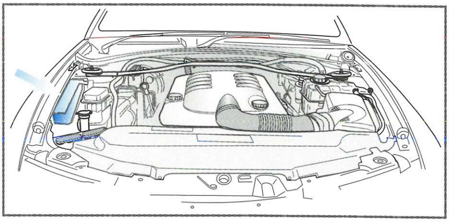
The main fuse panel is in the instrument panel, below the steering column.

Pull the hinged fuse panel down to reveal the fuses.



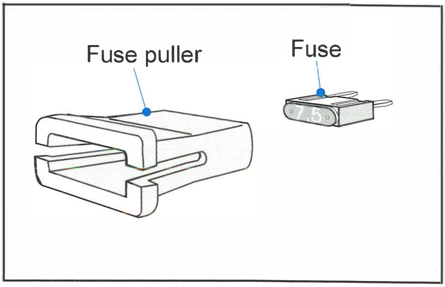
The separate, fuse / relay box is located in the engine compartment, marked 'Fuses'. Access to these fuses is gained by removing the snap-on cover.

Both covers have diagrams showing the layout of the fuses and the amperage rating.



To determine whether or not a fuse is 'blown', it is necessary to pull out the suspect fuse and examine the element in the fuse. A fuse puller is provided in the fuse panel inside the vehicle.

If the fuse has blown, replace with one of the same amperage, as stamped on the fuse head, for example:



COLOUR	RATING (AMPS)
Brown	7.5
Red	10
Blue	15
Yellow	20
Green	30
Orange	40

If a fuse blows twice in a row a fault is indicated. The cause should be promptly located and fixed.

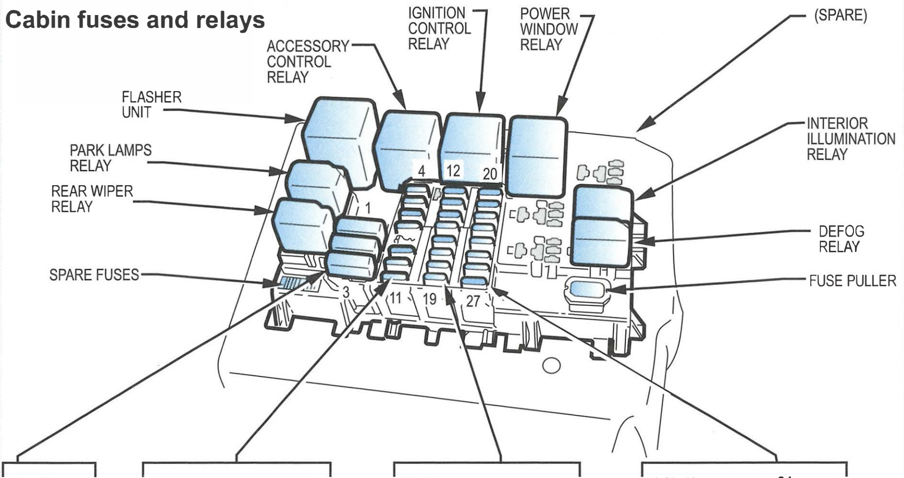
Ensure that the fuse cover, either inside the vehicle or under the bonnet, is securely in place.

WARNING:

When replacing a fuse be sure to use a fuse of the specified amperage. Never install a wire or similar as it could damage electrical components and cause a fire.

FUSES cont.

Cabin fuses and relays


ACCESSORY CONTROL RELAY
IGNITION CONTROL RELAY
POWER WINDOW RELAY
(SPARE)
FLASHER UNIT
PARK LAMPS RELAY
REAR WIPER RELAY
INTERIOR ILLUMINATION RELAY
DEFOG RELAY
SPARE FUSES
FUSE PULLER
1
3
4
12
20
11
19
27

1 (20A)
POWER WINDOWS

2 (20A)
POWER SEATS

3 (20A)
SUNROOF

4 (10A)
PARK LAMPS

5 (15A)
STOP LAMPS

6 (10A)
INTERIOR ILLUMINATION

7 (15A)
HAZARD LAMPS/ ANTENNA DRIVE VIABCM

8
(SPARE)

9 (15A)
HORN

10 (7.5A)
IGNITION

11 (7.5A)
INSTRUMENT ILLUMINATION

12 (15A)
TURN SIGNALS & BACK UP LAMPS

13 (7.5A)
ECC, TRIP COMPUTER INSTRUMENTS & TELEMATICS

14 (20A)
CIGAR LIGHTER

15 (10A)
CRUISE, POWER MIRRORS & MEM SEATS

16 (7.5A)
RADIO, NAVIGATION & CELL PHONE

17 (20A)
ACCESSORY SOCKET

18 (20A)
FRONT & REAR WIPER WASHER

19
(SPARE)

20 (15A)
POWER LOCKS, POWER WINDOWS & THEFT HORN

21 (10A)
INSTRUMENTS & CLIMATE CONTROL

22 (20A)
HEATED REAR WINDOW

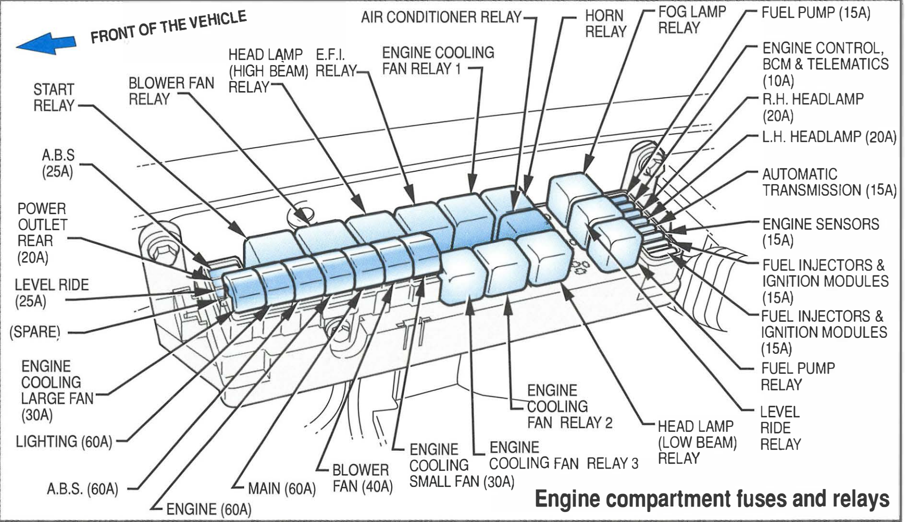
23 (15A)
RADIO, CELL PHONE & NAVIGATION

24
SUB-WOOFER AMPLIFIER **(20A)**

25
(SPARE)

26 (15A)
SRS

27 (10A)
ANTI LOCK BRAKES


FRONT OF THE VEHICLE
AIR CONDITIONER RELAY
HORN RELAY
FOG LAMP RELAY
FUEL PUMP (15A)
HEAD LAMP (HIGH BEAM) RELAY
E.F.I. RELAY
ENGINE COOLING FAN RELAY 1
START RELAY
BLOWER FAN RELAY
ENGINE CONTROL, BCM & TELEMATICS (10A)
R.H. HEADLAMP (20A)
L.H. HEADLAMP (20A)
A.B.S (25A)
POWER OUTLET REAR (20A)
AUTOMATIC TRANSMISSION (15A)
ENGINE SENSORS (15A)
LEVEL RIDE (25A)
FUEL INJECTORS & IGNITION MODULES (15A)
(SPARE)
FUEL INJECTORS & IGNITION MODULES (15A)
ENGINE COOLING LARGE FAN (30A)
FUEL PUMP RELAY
LEVEL RIDE RELAY
ENGINE COOLING FAN RELAY 2
LIGHTING (60A)
HEAD LAMP (LOW BEAM) RELAY
ENGINE COOLING SMALL FAN (30A)
ENGINE COOLING FAN RELAY 3
BLOWER FAN (40A)
A.B.S. (60A)
MAIN (60A)
ENGINE (60A)

Engine compartment fuses and relays

HAZARD WARNING FLASHERS

Hazard warning flashers

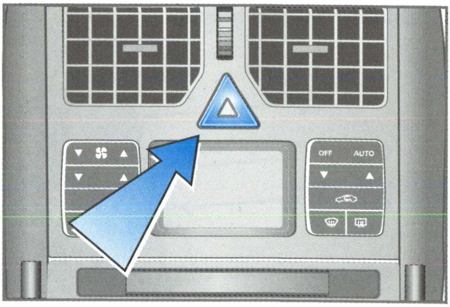
Press the switch (as shown) to turn the hazard warning flashers on and off. The hazard warning flashers work regardless of the ignition position.

When turned on, all turn signals flash continuously.

Use the hazard warning flashers to warn other drivers any time your vehicle becomes a traffic hazard, day or night.

Use of the hazard warning flashers while the vehicle is moving may be illegal in some states.

Note: If your vehicle requires towing, refer to ‘Towing your vehicle’ in Chapter 10.



ENGINE OVERHEATING

WARNING:

Immediate action is required if the engine overheats. This can be indicated by the temperature gauge needle moving over to the 'H' or the animated warning 'Engine Temp Hot' appearing on the central display (refer to Chapter 1), by steam escaping from under the bonnet, a loss of power or a loud knocking or pinging noise. Continued driving EVEN FOR A SHORT TIME could cause a fire or vehicle damage.

Pull out of the traffic as soon as possible and stop the vehicle. Leave the engine idling, ensure that the park brake is applied, and that the vehicle is placed in Park, while you get out and check that the cooling fan is working.

WARNING:

Do not open the bonnet if you can see or hear steam or coolant escaping from the engine compartment. Scalding fluid and steam can be blown out under pressure which could cause serious burns. Wait until no steam or coolant can be seen or heard before opening the bonnet.

If the fan is working and the temperature gauge needle has not returned to its normal position within a few minutes STOP the engine and remove the ignition key. Look for leaks at the radiator hoses and connections, heater hoses and connections, radiator and water pump. Take care when checking these areas as they will probably still be hot.

If you find a major leak or other problems that may have caused the engine to overheat, do not run the engine until these problems have been corrected.

If you do not find anything wrong, you should check the engine coolant level.

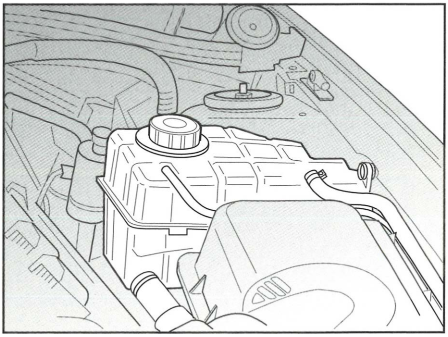
You should also check the air intake area below the front bumper to ensure that it is clear of leaves and road grime. Refer to Chapter 7, Weekly checks for details.

When the engine has cooled sufficiently, check the radiator level as follows.

- Cover the radiator cap with a thick cloth and turn it slowly anticlockwise (without pressing down) until it reaches a 'stop'. This is the pressure relief stop, which allows any remaining pressure (indicated by a hissing sound) to escape.
- Press down on the cap and continue turning it anticlockwise until it can be removed. Then remove the coolant dipstick. With the radiator cap off, top up the coolant dipstick tank if required. Remember to check that the dipstick is secure after filling. Then, **WHILE THE ENGINE IS IDLING**, top up the radiator (if required) and replace the radiator cap. Leave the engine idling for a few minutes while the level settles.

When the engine is cold the coolant level should be at or slightly above the 'COLD FILL' mark at the centre weld joint. After the vehicle has been driven and the engine is at normal operating temperature, the level should be between the centre weld joint and the cap. If the coolant level is correct, do not undo the cap.

Do not overfill as coolant requires space to expand when warmed up.



ENGINE OVERHEATING cont.

If, after carrying out one or more of the preceding actions the temperature gauge no longer signals an overheat condition, you can resume driving at a reduced speed. Return to normal driving after 10 minutes if the temperature gauge does not show an overheat condition once more. If overheating occurs again you should have the vehicle attended to by a qualified mechanic as soon as possible.

The engine may temporarily operate at high temperatures during demanding operating conditions, especially on hot days, including: climbing a long hill; stopping immediately after high speed driving; idling for long periods in traffic; towing a heavily laden trailer or caravan.

You should avoid driving for prolonged periods in any of the above conditions if the temperature gauge shows 'H'. It may help to turn off the air conditioner in these conditions. Chapter 7 gives instructions to help protect your cooling system from overheating.

FLAT BATTERY

WARNING:
DO NOT 'push start' or 'tow start' your vehicle. If unburnt fuel were to reach the catalytic converter and ignite, the converter could overheat or be destroyed by backfire. Therefore, if the battery is flat, you can 'jump start', but not 'push start' your vehicle.

Please read the following procedure in full before attempting to jump start your vehicle.

If, after reading the following procedure, you are still unsure about 'jump starting' we strongly recommend for your safety and that of your vehicle that you seek the assistance of a competent mechanic.

Jump starting

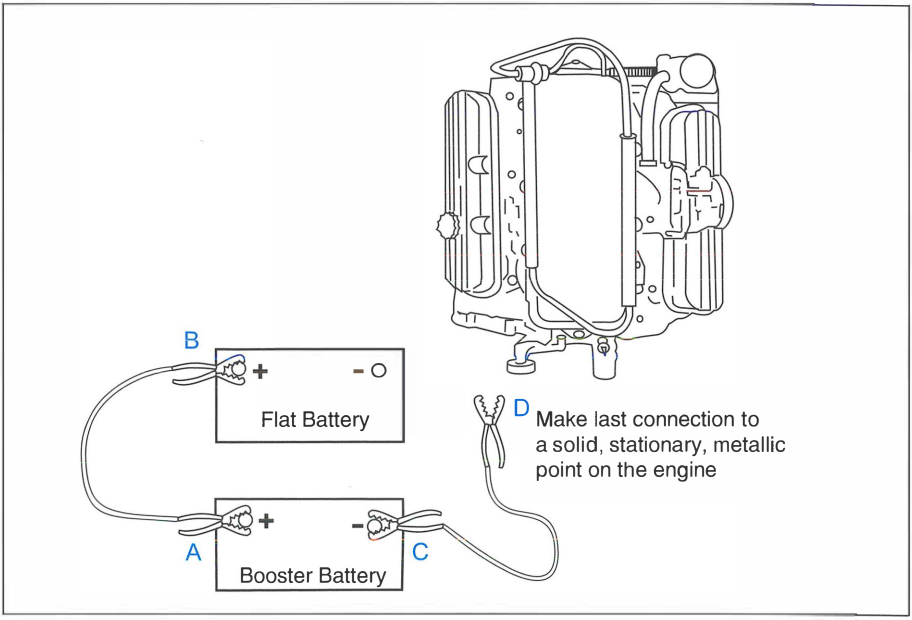
WARNING:
Batteries produce explosive gases, contain corrosive acids and supply levels of electrical current high enough to cause burns. Therefore, adhere to the following when working near a battery:

- Do not use open flames or sparks near the battery.
- Do not smoke near the battery.
- Wear eye protection such as safety glasses and avoid leaning over the battery.
- Battery acid is corrosive. If it gets on your skin, wash with plenty of water immediately. If it gets in your eyes you should not only flush with lots of water but should also seek medical help. Battery acid also damages paint and fabrics. To minimise damage, wash off immediately.
- Be sure any batteries that have filler caps are properly filled with fluid.
- Remove rings, metal watch bands and other metal jewellery before working around the battery.
- Never use a quick charger to start your engine.
- If you have a telephone fitted to your vehicle, you should remove the fuse for the telephone before jump starting. Remember to replace the fuse afterwards.

1. The battery in your vehicle has a negative earth and a 12 volt rating. The battery in the other vehicle **MUST** also have a negative earth and a 12 volt rating. Remove any battery covers.
2. Position the two vehicles so that they are NOT touching, apply the park brakes and put the vehicle in Park. Turn ignition to Lock and switch off all lights and accessories in both vehicles, except the hazard warning flashers or any lights needed for the work area.

FLAT BATTERY cont.

3. Attach one end of the RED jumper lead to the positive terminal (**A**) of the booster battery (identified by a red colour, + or P) and the other end of the RED jumper lead to the positive terminal (**B**) of the flat battery.



Make last connection to a solid, stationary, metallic point on the engine

4. Attach one end of the BLACK jumper lead to the negative terminal (**C**) of the booster battery (identified by a black colour, – or N) and the other end of the BLACK jumper lead to a solid stationary, metallic point on the engine (**D**) of the vehicle with the flat battery. DO NOT CONNECT DIRECTLY TO NEGATIVE TERMINAL OF THE FLAT BATTERY.

WARNING:

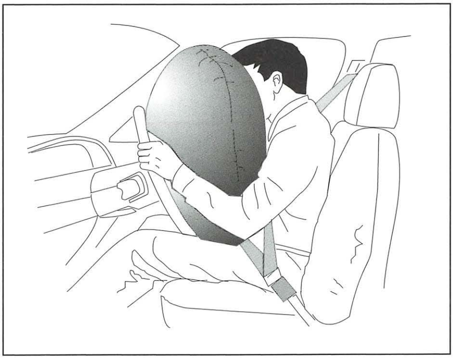
When making all connections take care that the jumper lead clamps do not touch each other. Also, ensure that jumper leads are not on or near pulleys, fans or other points that will move when the engine is started.

5. Start the engine in the vehicle with the good battery and run the engine at a moderate speed. Then start the engine with the flat battery.
6. Leave the engines running while removing the jumper leads in exactly the reverse order that they were installed. While removing each clamp, take care that it does not touch any other metal while the other end remains attached.
7. Replace any battery covers.

AIRBAGS

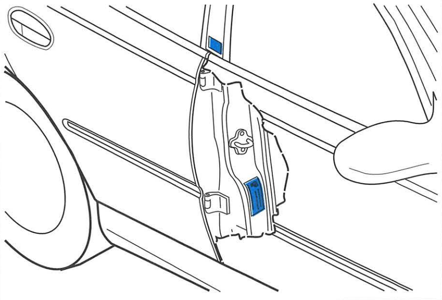
Your vehicle is fitted with a driver's airbag, stored inside the steering wheel ('SRS AIR BAG' is stamped on the steering wheel and a label is attached under the driver's side sunvisor).

Your vehicle also has a front passenger's airbag, stored in the dash panel. The fitment of a passenger's airbag is recognised by the wording 'SRS AIR BAG' above the glovebox and a label attached under the passenger's side sunvisor.



Your vehicle also has side impact airbags, for the driver and front passenger, stored in the side of the seat backs closest to the door. The labels are located on both door lock pillars and on the outside of the vehicle, as shown.

Side impact airbag labels
- on both sides of the vehicle



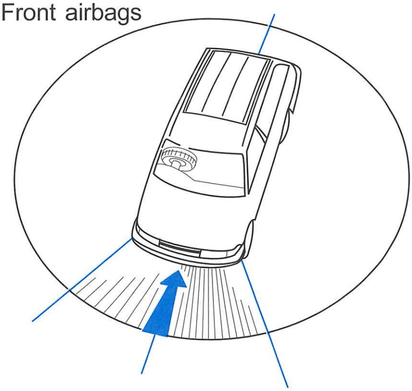
The two front airbags operate as a pair and are triggered simultaneously in the event of certain significant frontal impacts. However, side impact airbags are triggered independently.

In certain severe front end collisions, both front airbags inflate, assisting seat belts to restrain forward body movement. A side impact airbag will only trigger on the side of the vehicle that is struck.

When airbags inflate an operating noise may be heard and a small amount of smoke-like gas is released. The gas is harmless and does not indicate malfunction or fire. The airbag then deflates, with the whole process taking only a moment.

WARNING:
Airbags are part of the 'Supplemental Restraint System' as they assist, but do not replace seat belts. Airbags are not designed to inflate if the vehicle is hit from the rear or is overturned. **Seat belts must be worn by all passengers whenever the vehicle is moving.**

Front airbags



Front airbags will inflate if the vehicle is struck hard, in frontal or near frontal impacts. Front airbags will not inflate if the vehicle is struck from the side, rear, or in some rollovers. Always wear a seat belt.

AIRBAGS cont.

Airbags inflate with great force. If you are too close to an inflating airbag it may cause injury. Seat belts help keep you in position for airbag inflation in the event of a collision.

Ten seconds after any airbag or seat belt pretensioner (refer to Chapter 3) has been activated (and the vehicle has stopped and provided there is battery power) your vehicle will:

- unlock the doors,
- turn off the engine,
- turn off the fuel pump, and
- switch on the interior light.

Switch the ignition off and then on if restarting the engine is required.

An **SRS** warning light on the instrument panel illuminates for a few seconds when the ignition is switched on. This is to indicate that the airbags are operational. If the light does not show when the ignition is switched on, or if it illuminates when driving, you should contact your Holden Retailer immediately, as the airbags and seat belt pretensioners may not function correctly in the event of an accident.

The warning light will illuminate after an accident if any airbags or seat belt pretensioners have activated. Refer to Chapter 1 for details about warning lights and fault indicators applicable to airbag and pretensioner operation.

After an accident in which the driver’s airbag system was triggered, the steering wheel, steering column, airbag, seat belt and control module must be replaced.

If the passenger's airbag was triggered, the airbag assembly, airbag cover, seat belt and the dash panel also need to be replaced.

After side impact airbag deployment, the relevant seat, seat belt, sensor and control module require replacement. It is recommended that this work be carried out by a Holden Retailer.

WARNING:

Front passenger's airbag: The dashboard area must be kept clear. Do not place any objects over the dashboard or between an airbag and yourself. Nothing should hang from the sun visor or mirror and a passenger must not rest their feet on the dashboard.

Driver's airbag: The horn pad must not be covered with adhesive or any other material. The driver should adjust the seat as far back as possible and sit back as far as possible while still maintaining control of the vehicle.

Side impact airbags: Do not fit unauthorised seat covers as they may impair the deployment of the side impact airbags. Do not position your body or any object (including pillows) between front seats and doors. Front seat occupants should not lean on or sleep against the door. Always sit centrally in the seat.

AIRBAGS cont.

The system should also be inspected by a Holden Retailer if the dashboard area or steering wheel is scratched, cracked or damaged, or the front seats are damaged.

Extensive design and testing has gone into the Holden airbag system. However, it should be treated with respect. Any careless or unskilled interference with the system could lead to its failure or to accidental inflation. Any work to the electrical system, steering column, dashboard area, steering wheel, front seats or airbag system should only be carried out by an authorised Holden Retailer.

ROO BAR NOTE: Fitting a roo bar can change the impact speed which would normally cause the front airbags to inflate, reducing effectiveness and potentially increasing the risk of injury and repair cost. Please refer to Chapter 4 for further information about fitting a roo bar.

SIDE AIRBAG NOTE: The Side Impact Airbags (SIAB) will deploy and offer protection in most, but not all, severe side impacts. Because of the limited time available to detect some side impacts, it is not possible to deploy the SIAB in all serious accidents (for example, some pole impacts).

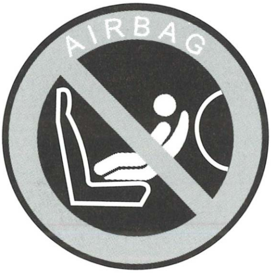
AIRBAG AND CHILD RESTRAINTS:

WARNING – EXTREME HAZARD:

Do not fit a child restraint in the front passenger seat as your vehicle is fitted with Front and Side Impact Airbags (SIAB). Your child could be seriously injured if the airbag inflates, as the child's head would be very close to the inflating airbag.

Remember that it is safest for children to be seated in the rear seats.

Please refer to 'Child restraints' in Chapter 3 for further information about fitting a child restraint.



BULB REPLACEMENT

Notes when replacing bulbs:

- Always turn off the related switch.
- It is important to fit only bulbs of the specified wattage.
- Do not touch new bulbs or reflectors with bare hands. Greasy fingers cause stains which evaporate, eventually resulting in a dull reflector. Grease spots on Halogen bulbs will, within a short time, lead to bulb failure. Inadvertently stained bulbs may be cleaned with methylated spirits.

Front lights

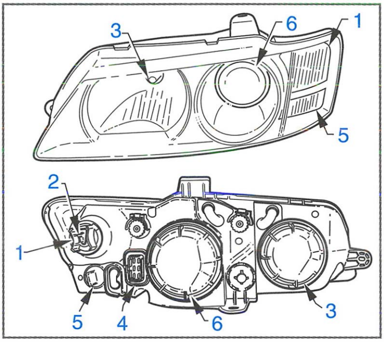
To gain access if replacing a bulb on the driver's side: Undo the battery clamp, remove the battery retaining plate, disconnect the battery terminals and remove the battery completely from the vehicle.

Note: After replacing the bulb on the driver's side, remember to replace and connect the battery.

To gain access if replacing a bulb on the passenger's side: The radiator cover must be removed (four screws). A hole is provided in the air intake duct through which bulbs can be accessed.

Note: After replacing the bulb on the passenger's side of a vehicle, remember to install the radiator cover (four screws).

If unsure of the bulb replacement process for the front lights, please have the work carried out by a competent mechanic.

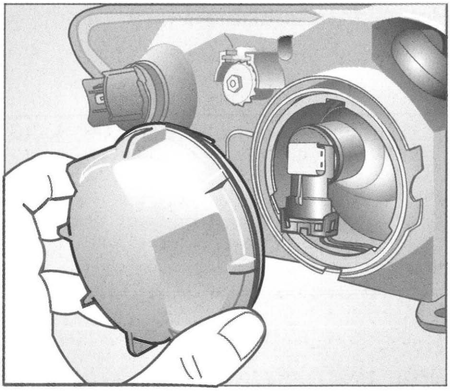


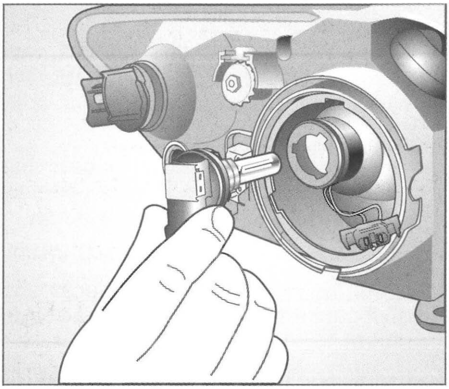
Front lights:

1. Turn signal lamp.
2. Turn signal wiring connector.
3. Headlights inboard high beam.
4. Headlight wiring connector.
5. Park lights.
6. Headlight outboard low beam.

BULB REPLACEMENT cont.

Headlights – outboard low beam





1. Open the bonnet. Refer to 'Front lights' previously described in this chapter for access instructions.
2. Turn the outboard dust cap anticlockwise and remove from the rear of the headlight assembly.
3. Remove the wiring harness connector by squeezing the two tangs on the harness connector and pulling the connector down.
4. Remove the bulb (H11 – 55 Watt bulb) by twisting the bulb anticlockwise to remove.
5. Install the new bulb.

   Note: Do not touch the new bulb with your fingers. If accidentally touched, wipe the bulb immediately with methylated spirits.

   The different sized locating tangs on the bulb base allow the bulb to sit correctly into the reflector in one position only.

   Simply twist the bulb clockwise to install.
6. Install the wiring harness connector and dust cap (ensuring the rubber seal is in place).
7. Install components removed, refer to 'Front lights' previously described in this chapter.
8. Check light operation.

BULB REPLACEMENT cont.

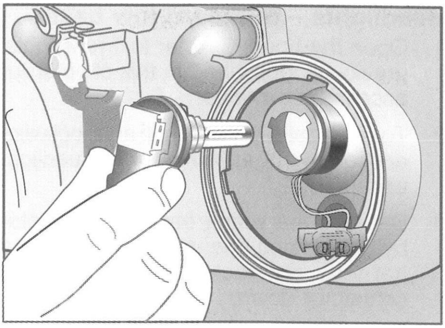
Headlights – inboard high beam

1. Open the bonnet. Refer to 'Front lights' previously described in this chapter for access instructions.
2. Turn the inboard dust cap anticlockwise and remove from the rear of the headlight assembly.
3. Remove the wiring harness connector by squeezing the two tangs on the harness connector and pulling the connector down.
4. Remove the bulb (H9 – 65 Watt bulb) by twisting the bulb anticlockwise to remove.
5. Install the new bulb.

   Note: Do not touch the new bulb with your fingers. If accidentally touched, wipe the bulb immediately with methylated spirits.

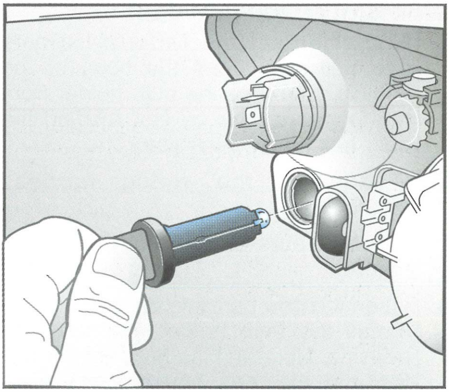
   The different sized locating tangs on the bulb base allow the bulb to sit correctly into the reflector in one position only.

   Simply twist the bulb clockwise to install.
6. Install the wiring harness connector and dust cap (ensuring the rubber seal is in place).
7. Install components removed, refer to 'Front lights' previously described in this chapter.
8. Check light operation.



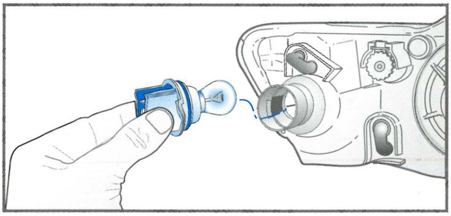
BULB REPLACEMENT cont.

Front park lights (5 Watts)



1. Open the bonnet. Refer to 'Front lights' previously described in this chapter for access instructions.
2. Remove the park light bulb holder by turning it anticlockwise and pulling it straight out.
3. Remove the park light bulb by pulling it straight out of the holder.
4. Insert the new bulb into the holder, then install the holder and dust cap (ensuring the rubber seal is in place).
5. Install components removed, refer to 'Front lights' previously described in this chapter.
6. Check light operation.

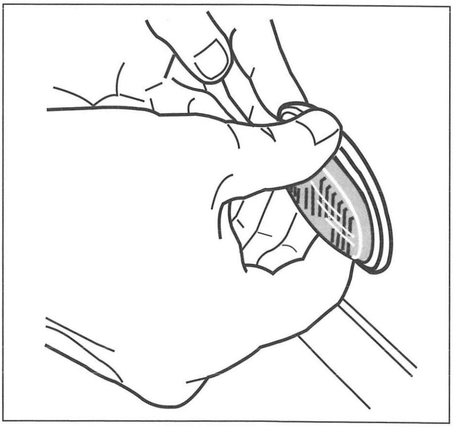
Front turn signal (21 Watts)



1. Open the bonnet. Refer to 'Front lights' previously described in this chapter for access instructions.
2. Disconnect the wiring harness connector.
3. Turn the bulb holder anticlockwise and remove.
4. Lightly press the bulb and twist anticlockwise out of the holder.
5. Insert the new bulb and install the bulb holder. Ensure that the same colour bulb is used. Some models have amber bulbs instead of clear.
6. Connect the wiring harness connector.
7. Install components removed, refer to 'Front lights' previously described in this chapter.
8. Check light operation.

BULB REPLACEMENT cont.

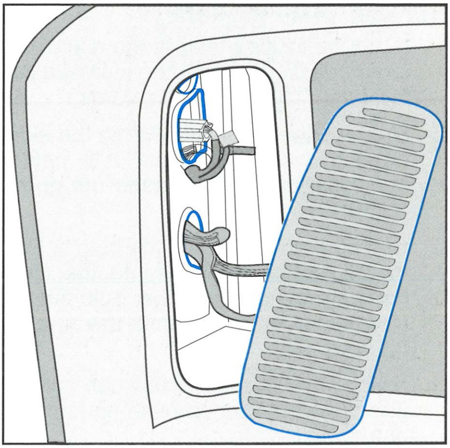
Side turn signal (5 Watts)



1. Grasp the lens at the rear, push forwards and pull away from the body of the vehicle. Separate the bulb holder from the lens assembly by first rotating the bulb holder anticlockwise.
2. Disconnect the wiring harness connector.
3. The bulb pulls straight out of the bulb holder.
4. Insert the new bulb into the bulb holder. Install the bulb holder into the lens housing. Note that the bulb holder only fits into the lens housing one way. Therefore, keep turning the bulb holder clockwise until it fits into place and can be tightened.
5. Connect the wiring harness connector.
6. When inserting the light, first locate the rear of the housing into the body before pushing the front inwards to engage the clip.
7. Check light operation.

BULB REPLACEMENT cont.

Rear turn signal (21 Watts), stop / tail (21 / 5 Watts)



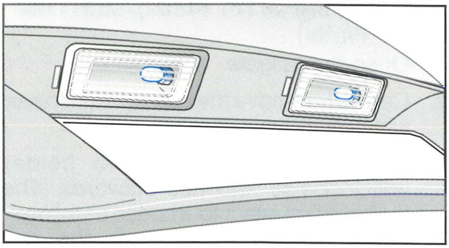
1. Open the tailgate.
2. Carefully remove the rear light trim cover with a flat-blade screwdriver.
3. Rotate the required bulb holder anticlockwise and pull outwards. The bulb holders are colour coded as follows, and the sequence from the top downwards is:
   - Orange – Turn signal (amber bulb)
   - Red – Stop / Tail (clear bulb)
4. Lightly press the bulb and rotate anticlockwise to remove from holder.
5. Install the new bulb in the holder.
6. Install the bulb holder into the vehicle.
7. Install the cover.
8. Check light operation.

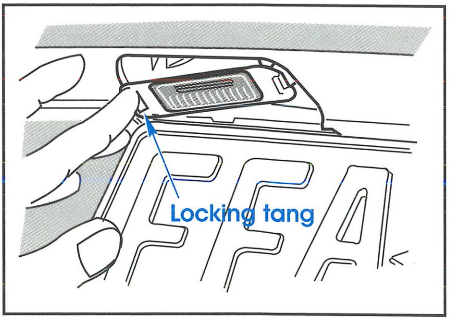
Fog lights (if fitted), instrument panel lights, vanity mirror lights (if fitted), reverse lights and rear high stop light

Bulb replacement for these light assemblies should be carried out by a Holden Retailer.

BULB REPLACEMENT cont.

Number plate (5 Watts)



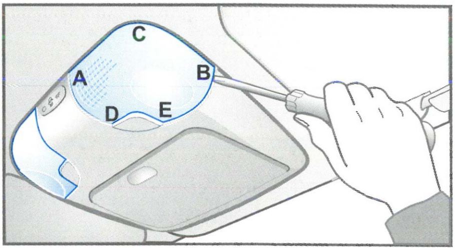


1. Push the locking tang at the end of the lamp housing towards the lens and pull the lamp assembly downwards.
2. Remove the bulb holder from the lamp housing by rotating the bulb holder anticlockwise. Pull the bulb out of the bulb holder.
3. Push the new bulb into the bulb holder. Install the bulb holder into the lamp housing by rotating the bulb holder clockwise, ensuring that the seal is undamaged.

   Note: The lamp assembly can only be fitted into the licence plate surround in one direction.
4. Install the lamp assembly into the surround.
5. Check light operation.

Roof console interior dome and front reading (10 Watts)

The interior dome lights and front reading lights are part of the roof console sunglasses holder assembly located centre-front of the roof's interior.



1. Loosen the cover of the reading light by levering with a fine blade screwdriver at point A and then point B, as shown.
2. To remove the cover, pull it downwards from point C to disengage the retaining clips at points D and E.
3. Carefully press the bulb and rotate it anticlockwise to remove it.
4. Install the new bulb by carefully pushing it into the holder and rotating it clockwise.
5. Install the cover by first inserting the edge at points D and E, then clipping it back into place at point C.

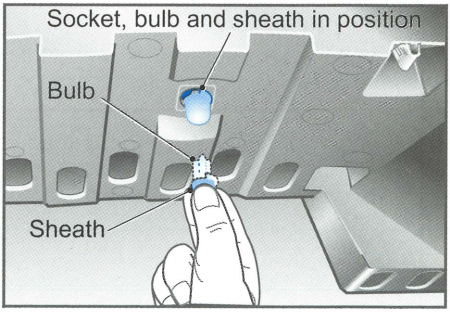
BULB REPLACEMENT cont.

Footwell lights, if fitted (2.7 Watts)

Front footwell light bulbs are located on either side of the vehicle in the following locations:

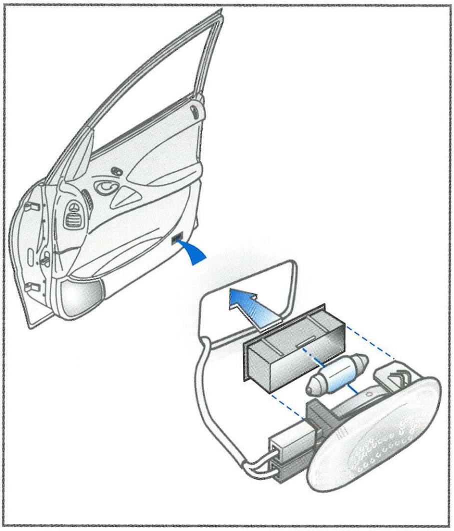
- On the driver's side in the hinge panel assembly.
- On the passenger's side in the hush panel assembly.

1. Twist the socket and pull down away from the panel assembly.
2. Pull the sheath off the bulb and pull the bulb from the socket.
3. Insert a new bulb into the socket and fit the sheath to the bulb.


Socket, bulb and sheath in position
Bulb
Sheath

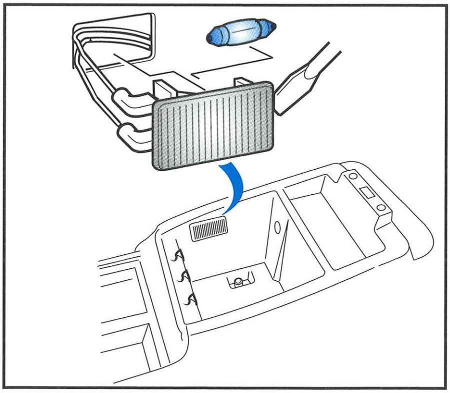
Door lights, if fitted (5 Watts)

1. Gently prise away the lens housing with a fine flat-bladed screwdriver at the side tabs and pull the lamp assembly from the door trim.
2. Squeeze both sides of the back metal cover and pull away to expose the bulb.
3. Pull the tab holding the bulb (opposite end to wiring) backwards and pull the bulb out. To install the new bulb, first pull tab backwards. When the new bulb is in place, fit the back metal cover, feed the wiring back into the cavity and push the lamp assembly back into place.



Glovebox (5 Watts)
Console bin (5 Watts) if fitted
Wagon load area (10 Watts)
Rear reading (6 Watts)

1. Gently prise away the lens housing with a fine flat-bladed screwdriver.
2. Pull the tab holding the bulb (opposite end to wiring) backwards and pull the bulb out. To install the new bulb, first pull tab backwards. When the new bulb is in place, feed the wiring back into the cavity and push the lens housing back into place.



NOTES

NOTES

CHAPTER

7

Weekly checks

Page

7-2 Miscellaneous checks
7-3 Check locations
7-4 Engine oil level
7-5 Engine oil consumption
7-6 Engine coolant level
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MISCELLANEOUS CHECKS

As well as taking your vehicle to be serviced (refer to the service booklet in your glovebox) there are a few simple, weekly checks that the owner / operator is recommended to make. These are shown on the following pages.

WARNING:

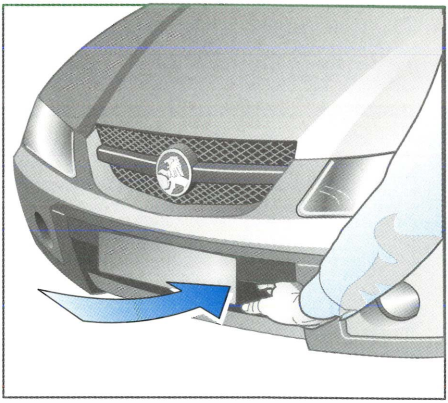
- If the engine temperature is high, the cooling fan may remain on for several minutes after turning off the ignition. Therefore, the engine cooling fan can start working unexpectedly, even when the engine is not running and the ignition is off.
- Electronic ignition systems have a high ignition power. Do not touch the ignition system; this could be highly dangerous.

The following checks should also be regularly done to ensure safety of your vehicle.

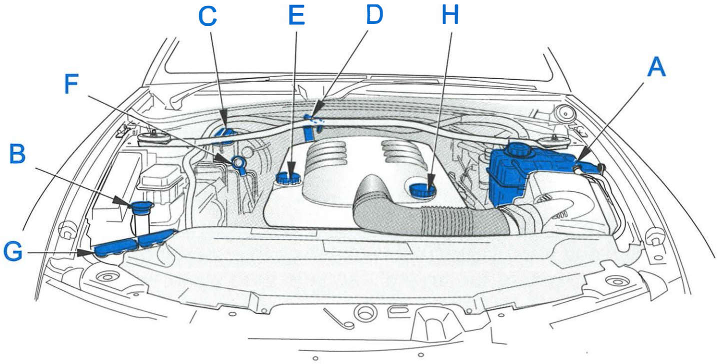
Check:

- that all exterior lights are working and that their appropriate interior indicators illuminate,
- mirrors and glass are clean and not scratched,
- automatic transmission selector indicator correctly lines up next to the gear selected,
- demister operates,
- horn works,
- condition and operation of all seat belts and check that buckles are clean and operating correctly. Remember that seat belts must never be worn twisted.

Check the air intake area below the front bumper for the build-up of leaves and road grime, which will impair engine cooling efficiency of the vehicle. It is recommended that this area also be cleared of debris whenever you wash your vehicle.



CHECK LOCATIONS



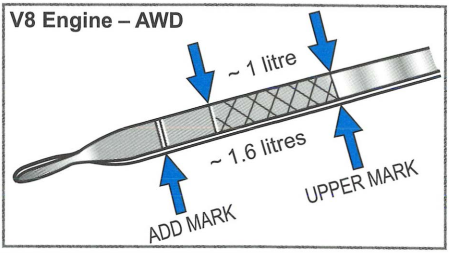
A	Engine coolant	page 7-6
B	Windscreen washer fluid	page 7-8
C	Brake fluid	page 7-9
D	Dipstick for automatic transmission	page 7-7
E	Engine oil cap	page 7-4
F	Dipstick for engine oil	page 7-4
G	Battery	page 7-13
H	Power steering fluid	page 7-10

ENGINE OIL LEVEL

To check the level

- The oil level should be checked weekly.
- Check the level when the oil is warm, such as when stopping for fuel.
- The vehicle must be on level ground.
- After switching off the ignition wait at least 10 minutes for the oil to settle.

The level is checked from the dipstick. Refer to the diagram on page 7-3 for location.



Remove the dipstick and wipe it clean with a clean cloth or paper towel. Insert the dipstick firmly all the way down, pause for several seconds then withdraw the dipstick and look at the oil level on it.

If the level is lower than or close to the add mark, top up with enough oil to reach the upper mark. Be careful not to add too much, as the reading should never be over the upper mark. A 1 litre reference (cross-hatch) is provided to help determine how much oil volume to add.

To add oil

Refer to Chapter 8 for engine oil specification.

To add oil, turn the oil cap anticlockwise and remove (refer to page 7-3 for location). Pour the required oil into the opening (clean up any spilled oil). Wait a few minutes for the oil to settle, then check the oil level with the dipstick again. If still too low, add more oil.

When correct, screw the cap back on tightly and replace the dipstick. If you check the oil level when the oil is cold do not run the engine first, as the cold oil does not drain back into the oil pan fast enough to give an accurate reading.

Note: Non-detergent and other low quality oils are specifically not recommended. The use of break-in oil, tune up compounds, friction reducing compounds and other supplemental additives are not recommended. Their use increases costs, may be detrimental to the operation of your vehicle and may void your New Vehicle Warranty, to the extent that Holden considers the non-recommended fluid to have affected the specifications or quality of your Holden vehicle.

Oil change intervals

Refer to the service booklet in your vehicle's glovebox for servicing requirements.

ENGINE OIL CONSUMPTION

Every internal combustion engine uses a certain amount of oil, especially when running-in. The engine is dependent on oil for lubricating critical areas, such as the cylinder walls, pistons, rings and valve stems. These parts are all subjected to high friction loads and will prematurely wear out without a constant supply of engine oil. A thin film of oil is left on the cylinder walls, some of which is carried into the combustion chamber and burnt during the combustion process. This also applies to the film of oil on the valve stems which is drawn into the combustion chamber and burnt.

There are several other factors that contribute to the rate of oil consumption in your engine: the way in which the vehicle is operated; the quality and grade of oil; the oil level and dilution of the oil; worn pistons, rings, valve stems and guides.

Operation of the vehicle: High speed driving and heavy towing increases engine temperature, which lowers oil viscosity, causing more oil to reach the combustion chamber and get burnt away. The oil level should always be checked prior to towing or a long trip.

Quality and grade of oil: Oil viscosity is a significant factor in oil consumption. If you use an oil which is too 'thin' (low viscosity) your oil consumption will increase. Use only the recommended grades of oil.

Oil level: Maintaining a proper oil level is also an important factor in controlling oil consumption. An over-full engine will splash oil onto the cylinder walls in quantities greater than the piston rings can control. This excess oil is drawn into the combustion chamber and burnt, or may result in aeration of oil in the sump causing damage to the engine.

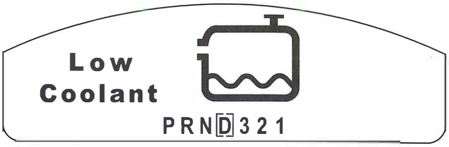
Dilution: Probably the most prevalent complaint of oil consumption comes from the driver whose vehicle is frequently driven on short trips where the engine often fails to reach normal operating temperatures. The oil becomes diluted by fuel and moisture that settles in the oil pan. This may raise the oil level creating a false reading on the oil level dipstick. For example, in a vehicle that has accumulated 1500 km of short distance or intermittent city operation and has consumed a normal amount of oil, the level may not have dropped from the upper mark, due to dilution. If this vehicle is driven for some distance at highway speeds on a warm day, the dilution elements evaporate lowering the oil level. This sudden change in oil level can give the driver the impression that an excessive amount of oil has been 'lost' in the highway operation.

Measuring oil consumption: A simple consumption test can be performed if the driver is concerned by an apparent drop in the oil level.

Add sufficient oil to bring the level up to the upper mark on the dipstick (avoid overfilling). Take note of the odometer reading and check the oil periodically. When the level reaches the add mark, carefully measure the amount of oil required to return the level back to upper mark and note the odometer reading. The amount of oil added for the kilometres travelled over the duration of the test indicates the oil economy of the engine. Remember to check the oil level at the start and finish of the test on level ground and allow time for oil to drain down (i.e. wait approximately 10 minutes after engine is turned off). Avoid minor top-ups (0.25 to 0.5 litre) when measuring oil consumption, as inaccuracies of oil quantity added, may cloud the result.

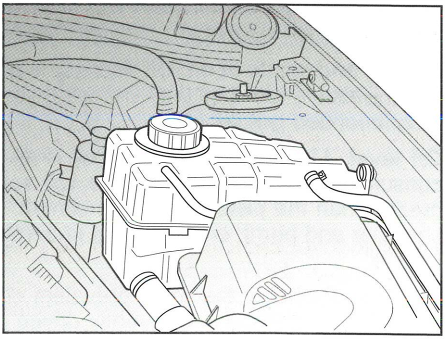
If, after taking into account the above factors, you are still concerned that your engine has excessive oil consumption then you should discuss the situation with a Holden Retailer. Remember that an engine's oil consumption should not be judged until it has run at least 10 000 km.

ENGINE COOLANT LEVEL



Your vehicle provides a low coolant warning in the instrument panel centre display, refer to Chapter 1 WARNING / REMINDER INDICATIONS for more details.

If the 'Low Coolant' animation illuminates while driving, it indicates that the engine coolant level is dangerously low. You should check the level as soon as possible. As this may involve checking the level when the coolant is hot, refer to the instructions in Chapter 6 ENGINE OVERHEATING and the relevant warnings in that chapter.



Regardless of the low coolant warning, the coolant level should be checked at least weekly, by looking at the level in the plastic tank when the engine is **cold**. For ease of location, the coolant cap is coloured yellow.

The coolant level should be at or slightly above the 'COLD FILL' mark at the centre weld joint when the engine is cold. The level rises when the engine is running and drops again when the engine cools down. If the level falls below the weld joint, coolant should be topped up to a little over the mark. Do not overfill, as coolant requires space to expand when warmed up.

The coolant in the V8 engine conforms to Holden specifications, and can be bought from your Holden Retailer. Failure to use the coolant meeting Holden specifications or maintaining the specified concentration may result in voiding your warranty.

If the coolant requires topping up, mix a solution of Holden coolant and clean fresh water in a container as per the ratio specified in Chapter 8. Then, when the engine is cold, undo the cap and pour the fluid into the plastic tank. When the level is correct, replace the cap and turn clockwise until secure.

In emergency situations, plain clean fresh water may be used temporarily until Holden specification coolant is obtained (as soon as possible) from the nearest Holden Retailer.

The specified coolant works in three ways: it contains special corrosion inhibitors, it helps the cooling system in hot weather by increasing the boiling point and it protects against freezing down to –37°C, provided the specified concentration is maintained.

WARNING:

Corrosion inhibitors and antifreeze fluids are poisonous. Use extreme care when handling. If swallowed, seek medical attention. Do not remove the coolant cap if the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure which could cause serious burns.

Refer to Chapter 6 ENGINE OVERHEATING if the low coolant warning shows or if the engine overheats or loses a lot of coolant. If you regularly have to top up the cooling system you should see your Holden Retailer.

AUTOMATIC TRANSMISSION FLUID LEVEL

The fluid level should be checked monthly, by looking at the fluid level on the dipstick.

The dipstick handle is located at the rear of the engine compartment, on the driver's side (refer to diagram on page 7-3).

Dirt in the transmission can cause breakdowns, so be careful when checking or adding fluid.

The fluid should be checked after the vehicle has been driven for at least 20 kilometres so that the fluid is hot.

The vehicle must be standing on level ground with the engine running.

The gear shift selector should be in Park and the park brake applied.

Unlock the handle and remove the dipstick; wipe it clean with a clean cloth or paper and re-insert it fully. Remove it again and read the fluid level.

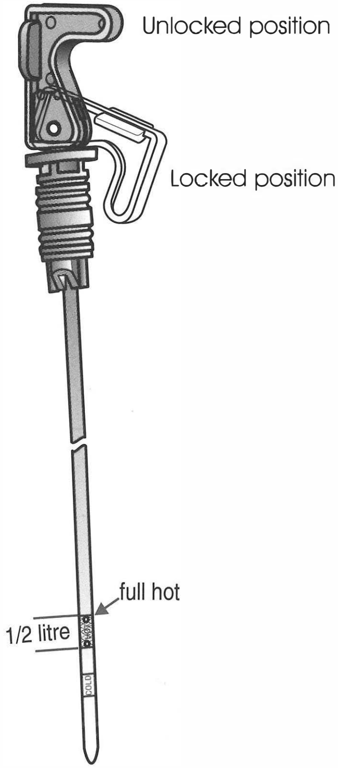
The fluid level should be showing on the cross hatched HOT area.

The level should NEVER read over the FULL HOT mark, so be careful not to add too much.

If adding fluid, use only Holden specified automatic transmission fluid (refer to Chapter 8 for the correct specification). Add the fluid in the dipstick tube (the same opening as the dipstick is stored in) and wait 1 minute for the oil to settle (clean up any spilled fluid). Again check the level on the dipstick with the engine running and add further fluid if necessary. Remember to always replace the dipstick and lock the handle down.

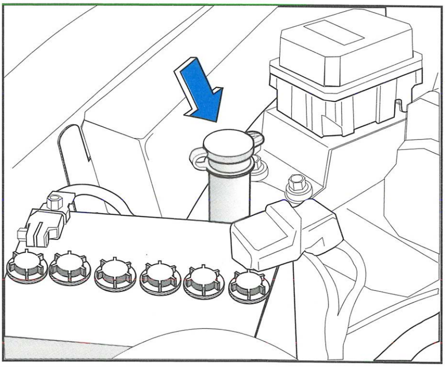
If fluid has to be added often, there may be a problem or leak and you should see your Holden Retailer.

Note: The cold markings on the dipstick should only be used as an indication when initially filling the transmission after the fluid has been completely drained. It should be rechecked when hot.



WASHER FLUID LEVEL

The washer container is located in the engine compartment, near the battery. It has a flip top yellow cap.



The container shown supplies water to both the front windscreen washer and tailgate washer.

As washer fluid is constantly used the level should be topped up weekly.

For a crystal clear windscreen, the correct amount of Holden washer fluid additive can be added (refer to Chapter 11 Cleaning). Do not use ordinary soap or detergent as these not only froth up but will also damage the wiper rubbers.

Make sure the cap is secured.

BRAKE FLUID LEVEL

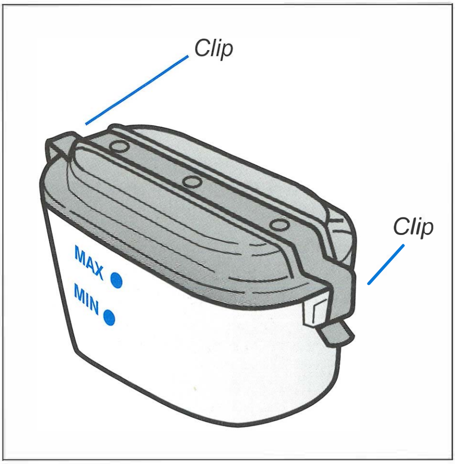
WARNING:
Brake fluid is poisonous and corrosive and will damage the paint finish of your vehicle if spilt.

The brake fluid level in the master cylinder should be checked weekly. The fluid level, is visible through the master cylinder (see page 7-3 for location) and should be maintained between the MIN and MAX level markings. If the fluid is between these levels do not remove the master cylinder cap, as brake fluid exposed to the atmosphere will quickly absorb moisture.

If fluid does need to be added, first ensure that the ignition is switched off. Wipe clean the sides of the top cover. Then, unclip and lift off the top cover. Top up with heavy duty brake fluid which meets Holden specifications (refer to Chapter 8 for the correct specification). Remember to secure the cap at each end and clean up any spilled fluid.

Use only new brake fluid. Use of old, used or inferior brake fluid may endanger the functioning of the brake system.

If the master cylinder requires constant topping up it could indicate that a fault exists and you should immediately see your Holden Retailer.



POWER STEERING FLUID LEVEL

The level should be checked after the vehicle has been driven for a while (at least 20 minutes) so that the fluid is warm. A convenient time is when stopping for petrol. The cold level check should only be used after the engine has not been running for at least 5 hours. However, the hot level check is always recommended.

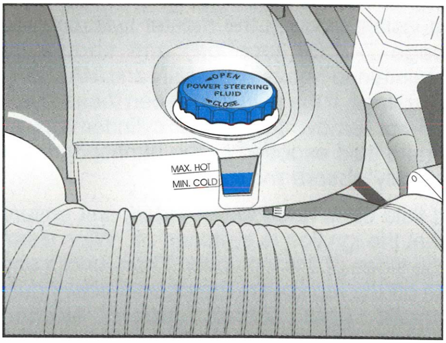
Refer to page 7-3 for location of the reservoir.

The fluid level can be viewed through the transparent reservoir. The level markings are next to the fluid window.

When the engine is hot the level should be between the MAX HOT and half way to the MIN COLD mark.

If the level is getting close to the MIN COLD mark when the engine is cold, add enough fluid to bring the level to half way between the two marks.

If fluid must be added, undo the cap anticlockwise to the safety 'stop'; push down on the cap and turn it further anticlockwise, until the cap can be lifted off.



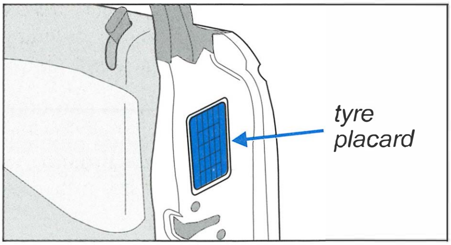
Refer to Chapter 8 for the correct power steering fluid to use.

Do not over fill and remember to replace the cap tightly. If you often need to add fluid, you should see your Holden Retailer.

Remember to secure the cap when the level is correct and clean up any spillage.

TYRES

Air pressure



Weekly checking of the air pressure of your tyres (including the spare) ensures your safety, as well as reducing fuel consumption and increasing the life of your tyres.

For constant long distance or rough road driving, daily checking is recommended.

The correct pressure for your tyres is shown on the tyre placard located on the driver's door.

If the vehicle is heavily loaded, the recommended pressure for the tyres is increased (refer to the tyre placard on your vehicle). As the tyres are operating under greater load the weekly air pressure check becomes even more important.

Tyre inflation pressure increases when the tyres have been driven more than 2 km. Therefore, the pressure should be checked when the tyres have been stationary for over 3 hours. If they must be checked immediately after driving, increase the pressure shown on the placard by 10%.

The inflation pressure in the tyres should be increased according to the load on the vehicle. Therefore, if the vehicle is loaded to half the maximum payload (as shown in Chapter 10) then the tyres should be inflated half way between the minimum and maximum pressures given on the tyre placard. The same pressures should be used for rough, stony or gravel roads. DO NOT INCREASE TYRE PRESSURES ABOVE THE RECOMMENDED VALUES FOR ROUGH, STONY OR GRAVEL ROAD DRIVING.

Always use a tyre pressure gauge to check the tyres; simply looking at the tyres is not sufficient.

If the pressure is too low, this can result in considerable tyre warm-up and internal damage, leading to tread separation and even to tyre blowout at high speeds.

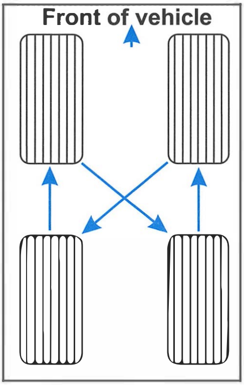
If the pressure is too high, this can result in reduced traction, increased risk of tyre blowout and poor tyre wear.

Remember to replace any valve dust caps or extensions, as this stops dirt and moisture from fouling the valves. When checking the tyre air pressure, take a look at the condition of the tyre tread and inspect for stones or abnormal wear.

Tyre rotation

Front and rear tyres perform different jobs and can wear differently depending on the types of roads driven, your driving habits, wheel alignment / balance, tyre pressures etc.

Tyre condition is checked for you when you take your vehicle to be serviced by your Holden Retailer, who is able to diagnose any unusual signs of wear. If the tyres are rotated it is recommended that the balance be checked at the same time.



TYRES cont.

Alignment and balance

Improper wheel alignment can cause the tyres to wear faster and to wear unevenly. It can also cause the vehicle to pull to the left or right.

Out-of-balance wheels and tyres can cause annoying vibration and uneven tyre wear.

If you suspect either of the above problems exist have a wheel alignment and balance check carried out by your Holden Retailer.

Replacement and repair

Replacing your factory fitted wheels and tyres with non-specified wheels and tyres may affect your warranty as well as your insurance policy. Refer to the tyre placard on your vehicle for tyre size and load rating, see previous page. Using a different size or type of tyre may affect such things as ride, handling, speedometer, vehicle ground clearance, tyre clearance or snow chain clearance.

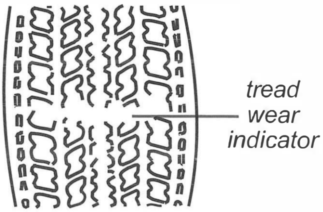
Take care when using tyres with heavy treads, including tyres made for better grip in the wet. At sustained high speeds, this type of tyre runs at higher temperatures than standard tyres and consequently should only be operated within the limits recommended by the manufacturer. Any doubts about the tyres on your vehicle should be referred to your Holden Retailer.

When replacing tyres, it is strongly recommended to fit the same brand and type of tyre as was originally fitted (Bridgestone ER30 Turanza 225 / 55R17). These tyres have been specially developed for your AWD wagon.

New tyres should be fitted in pairs to the front. If replacing only one tyre, it should be paired on the same axle with the least worn of the other three.

You should replace your tyres when:

- The tyres are worn to the point where the tread indicators appear, or the cord or fabric is showing. The tyres originally fitted to your vehicle have built-in tread indicators. When only 1.5 mm of tread remains, these indicators show as plain bars across the tread pattern at regular intervals around the tyre.
- The tread or sidewall is cut, split, or cracked deep enough to expose the cord or fabric.
- The tyre has a bump or bulge in it, indicating some kind of internal damage.



- The tyre has a puncture, cut or other damage which can not be repaired because of the size or location of the damage.

Do not attempt to drive on the flat tyre more than is necessary to stop safely. Driving even a short distance can damage the tyre and wheel beyond repair. Tyres which have been repaired or retreaded are not capable of being driven safely at high speeds. Therefore, their use is not recommended.

Refer to Chapter 8, Specifications for recommended tyres for your AWD wagon.

BATTERY

WARNING:

- Batteries emit an explosive gas mixture which may be ignited. Therefore, you should keep sparks and flames away from the battery at all times. Never smoke near a battery.
- Batteries contain sulphuric acid. If acid contacts skin or clothing, flush immediately with plenty of water. In case of eye contact, flush with plenty of water and contact a doctor immediately. Battery acid also damages paint and fabrics. To minimise damage, wash off immediately.
- Take care with all metal objects and tools including items you may wear (e.g., jewellery, rings and metal watch bands) near battery terminals.

Fluid check

The fluid level of the battery will be checked for you when you take your vehicle to be serviced by your Holden Retailer. If your vehicle is operated in hot temperatures or at constant high speed the battery fluid level should be checked each month.

When checking the battery level, make sure the engine is not running. Each of the six cells must be individually checked. Use distilled water, as required, to keep the level just below the bottom of each split tube. DO NOT OVER FILL.

Vehicles with V8 engines have a battery cover to keep the battery cool. The cover should always be securely in place when driving.

Refer to Chapter 6 for emergency starting when the battery is flat.

Refer to Chapter 8 for the correct replacement battery specification.

Battery disconnection

The battery is recharged by the alternator when the engine is running. If the engine is not run for approximately 6 weeks the battery will discharge, due to the power required by the security system etc. If the battery is disconnected it will discharge anyway after approximately 12 weeks.

If you disconnect the battery when leaving the vehicle for a long period of time, it is recommended that the battery be 'trickle fed' on a battery charger overnight, before installing it back into the vehicle.

If the battery is disconnected for any reason:

- Some trip computer displays will be reset; trip time, trip distance, fuel used, average fuel, average speed and stop watch.
- Higher luxury vehicles fitted with the personal identity key system (refer to Chapter 2), the key may 'forget' some settings. Your adjustments will be remembered by the key next time you adjust the feature.

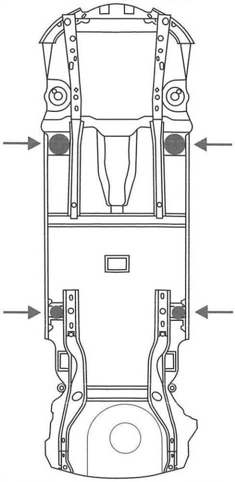
TROLLEY JACK LOCATIONS

You should always use the jack locations shown in Chapter 6 when using the original jack supplied with your vehicle. This jack has been designed to correctly and safely lift your vehicle, provided the warnings in Chapter 6 are observed.

However, if using a trolley jack to raise the vehicle, it is important that the jack be positioned under the suspension cross member or hoist pad locations. DO NOT JACK UNDER THE SUSPENSION CONTROL ARMS. The vehicle should always be supported by jack stands when raised.

Each jack point has a removable plastic cover over the jacking point. Pull the cover towards you. The cover is retained by a plastic strap which allows it to hang until refitted.

Trolley jack lifting points



NOTES

CHAPTER 8

Specifications

Page

8-2 General specifications
8-4 Identification labels

GENERAL SPECIFICATIONS

Engine Type	GENERATION III V8
Engine capacity	5667 cc
Engine power	235 kW @ 5200 rpm
Engine torque	460 Nm @ 4000 rpm
Engine oil specification	For optimum fuel economy, use SAE 10W/30 SJ or SL, ILSAC GF2 or GF3 engine oil. If this oil is unavailable, use SH, SJ or SL engine oil, with viscosity of 20W/50 or 15W/40.
Refill engine oil capacity	8.0 litres approximately (including filter)
Front differential oil	Mobil Mobilube SHC ID 0.8 litres approximately
Transfer case differential oil	ESSO MTF -LT-1 Manual Transmission Fluid ESSO Product No. EGL72304 0.25 litres approximately
Rear differential oil	Mobil Mobilube SHC ID 1.5 litres approximately
Coolant specification	50% clean fresh water and 50% Extended life anti-freeze coolant conforming to Specification Number GM 6277M,Part Number 92145527 (5 litre).
Coolant capacity	14.3 litres approximately
Automatic transmission fluid	Dexron® III
Refill automatic transmission capacity	5 litres approximately
Brake and clutch fluid	Heavy duty brake fluid, conforming to Holden Specification Number HN 1796 (Super DOT 4)
Power steering fluid	Dexron® III
Fuel tank capacity	75 litres
Battery	Low maintenance, 12 volt, 85 minutes reserve capacity, 430 Cold Cranking Amps (CCA)

GENERAL SPECIFICATIONS cont.

Dimensions (mm)

Length	5036
Width – excluding mirrors	1934
Height	1654
Wheel base	2948
Overhang – front	931
Overhang – rear	1158
Front track	1617
Rear track	1623

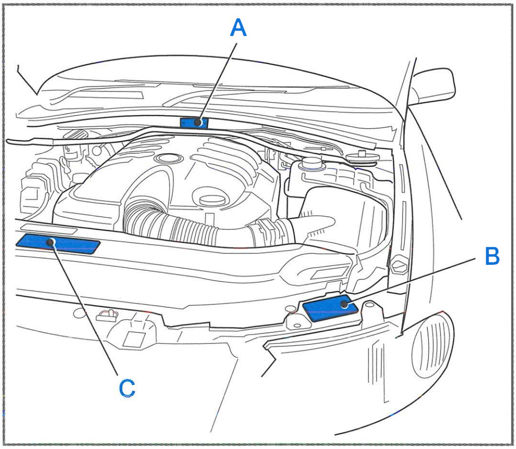
Tyres

The original fitment tyres for the AWD wagon (Bridgestone Turanza ER30 225 / 55R17) have been specially developed for your vehicle. When replacing the tyres, it is strongly recommended that you fit the same brand and type of tyre as was originally fitted.

Body lubricants

Bonnet catch	NLGI No. 1 Lithium Grease (with Zinc Oxide) meeting Holden Specification HN 1225.
Door hinge grease	NLGI No. 1 Lithium Grease (with Zinc Oxide) meeting Holden Specification HN 1225.
Check link housing	NLGI No. 2 Polyurea Grease (mineral oil base) 1.2 g applied to housing.
Check link arm	NLGI No. 2 Lithium Complex Grease 1.2 g applied to arm.
Front door lock cylinder	Powdered Graphite applied through key aperture DO NOT OIL.

IDENTIFICATION LABELS



A Safety Compliance Plate (Australian vehicles)

Shown on the plate are the vehicle Make, Model Series, Date of Manufacture, Vehicle Identification Number (VIN), approved seating capacity and Approval Number.

B Body and Option Plate

This plate shows model identification, Vehicle Identification Number (VIN), paint and trim colour combination, air conditioning, paint number, engine, transmission, axle ratio options, suspension options (where applicable) and build date. The build date is defined as 'the date of manufacture' by calendar month and year in which the body shell and powertrain sub-assemblies are co-joined and the vehicle is driven or moved from the production line.

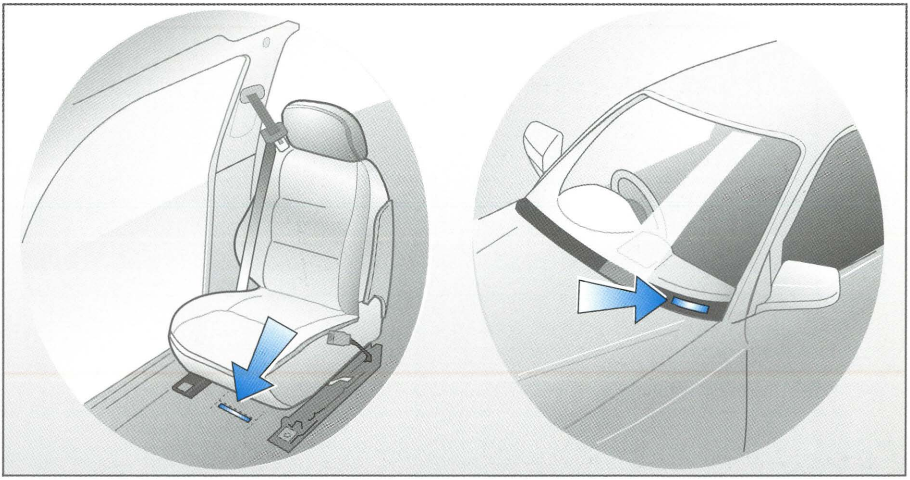
C Emission Label

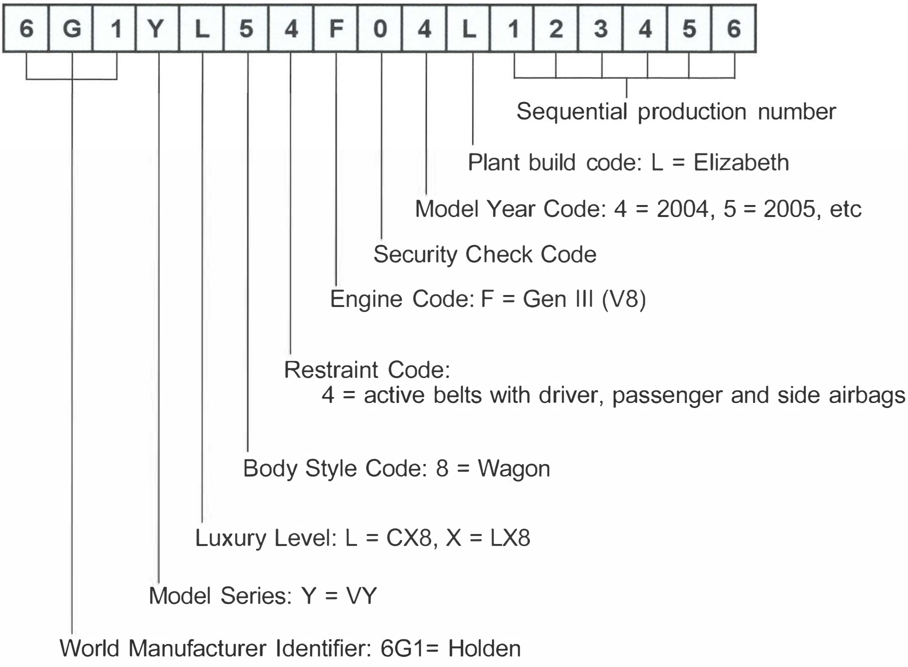
This label shows the relevant tune-up information required to maintain minimum exhaust emissions.

IDENTIFICATION LABELS cont.

International Standards Organisation Vehicle Identification Number

Each vehicle has its own, individual I.S.O.V.I.N., which is shown both behind the windscreen and under the driver's seat of your vehicle.




6 G 1 Y L 5 4 F 0 4 L 1 2 3 4 5 6

Sequential production number

Plant build code: L = Elizabeth

Model Year Code: 4 = 2004, 5 = 2005, etc

Security Check Code

Engine Code: F = Gen III (V8)

Restraint Code:
4 = active belts with driver, passenger and side airbags

Body Style Code: 8 = Wagon

Luxury Level: L = CX8, X = LX8

Model Series: Y = VY

World Manufacturer Identifier: 6G1= Holden

CHAPTER 9

After Sales

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9-4 Parts and accessories warranty
9-5 Warranty questions and answers
9-8 Roadside assistance
9-10 Customer assistance
9-11 For New Zealand Holden owners
9-12 Australian Holden Retailers
9-26 New Zealand Holden Retailers

Note: The names and details of Retail Premises may change after the printing of this Handbook. The list contains both Authorised Holden Retailers and Authorised Holden Service Operations.

NEW VEHICLE WARRANTY CERTIFICATE

New Vehicle Warranty application

This Warranty is given by Holden Ltd, ABN 84 006 893 232, ('Holden'). The Warranty applies to the vehicle identified on the inside front cover of the service booklet in your vehicle's glovebox. It is provided to the original and subsequent owners / operators driving the vehicle within Australia during the Warranty Period.
This Warranty is given in addition to all rights conferred by law on that person.

Australian vehicles

This Warranty is only applicable to vehicles purchased and operated in Australia.

Owners of vehicles purchased in Australia but operated overseas should consult the local Retailer in the country of operation about any Warranty applicable to their vehicle. This Warranty does not apply for Holden vehicles exported overseas. Similarly, this Warranty is not provided for vehicles purchased overseas and imported into Australia.

Repairs covered

Subject to the exclusions shown on the following page, this Warranty covers the correction, during the Warranty Period, of any vehicle defect related to materials or workmanship and advised to a Holden Retailer or Authorised Service Outlet, by repair or at Holden's option by replacement.

100,000kms
3
years

Warranty Period

The coverage commences from the date of delivery (or in the case of a demonstrator vehicle the date when the vehicle was first placed into service by the Retailer). The coverage expires at the end of the period of 3 years after the commencement date or after the vehicle has travelled 100 000 kilometres, whichever occurs first.

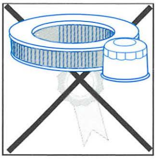
No charge

Warranty work undertaken (including parts and labour) will be carried out at no cost to the vehicle owner. However, this work should not be confused with servicing specified in the Maintenance schedule in the service booklet for which a charge is payable.

NEW VEHICLE WARRANTY CERTIFICATE cont.

Warranty exclusions

- **Damage**
  Your Warranty does not extend to the following damage:
  Damage caused by an accident, fire, theft or moving objects striking the vehicle.
  Damage caused by industrial fallout, chemicals or sealants.
  Damage caused by atmospheric fallout or flood, hail, salt, etc.



- **Maintenance items**

  Services such as brake adjustment, replacement of filters, wiper rubbers etc., which are required as part of normal vehicle maintenance (refer to the service booklet in your vehicle's glovebox).

Manufacturer

- **Tyres**

  The tyres (and tubes where applicable) fitted to your vehicle are not covered by this Warranty. However, they may be covered by the tyre manufacturer.

- **Batteries**
  Batteries are warranted for 12 months.

- **Misuse**
  This Warranty does not cover damage caused by:
  (a) misuse or abuse of the vehicle such as by racing, rallying, overloading, etc., or neglect
  (b) operation of the vehicle after the defect is known
  (c) failure to carry out proper maintenance services (refer to the service booklet in your vehicle's glovebox)
  (d) use of incorrect types and grades of fuel, oil or lubricants
  (e) alteration of the vehicle by anyone not authorised by Holden
  (f) fitting of parts or accessories not recommended by Holden
  (g) any work carried out on the vehicle by anyone except an authorised Holden Retailer or authorised Service Outlet.

PARTS AND ACCESSORIES WARRANTY

Holden warrants Holden approved Parts and Accessories ('Parts' and 'Accessories') for the periods and on the conditions set out below. The Warranty covers the correction, during the relevant Warranty Period, of defects in any such Parts and Accessories, by repair or at Holden's option by replacement.

- **Accessories installed to the new vehicle**

  Holden approved Accessories installed by a Holden Retailer or authorised Service Outlet to the new vehicle at the time of purchase are covered together with the New Vehicle warranty for the period of 3 years or 100 000 km, whichever occurs first.

- **Parts and Accessories installed after new vehicle delivery by a Holden Retailer or authorised Service Outlet**

  Parts and Accessories installed after new vehicle delivery by a Holden Retailer or authorised Service Outlet are covered for 2 years or 50 000 km (whichever occurs first). If the vehicle is still within the New Vehicle Warranty the Parts and Accessories are covered by the longer of:

  2 years / 50 000 km (whichever occurs first)

  or

  the end of the New Vehicle Warranty.

  As an example, an Accessory installed in a 7 month old vehicle would be covered until the end of the New Vehicle Warranty; an Accessory installed in a 2½ year old vehicle would be covered until the end of 4½ years or a further 50 000 km from when the Accessory was installed.

- **Purchased at retail or trade**

  Parts and Accessories purchased at trade or retail and installed by other than a Holden Retailer or authorised Service Outlet are warranted for 1 year from the date of purchase. Please keep a receipt to support warranty claims.

  The Warranty does not cover the labour costs of removal / reinstallation of Parts and Accessories when installed or rectified by other than a Holden Retailer or authorised Service Outlet.

- **Parts and accessories warranty exclusions**

  The tyres (and tubes where applicable) are not covered by this warranty. However, they may be covered by the tyre manufacturer.
  Batteries are warranted for 12 months from date of purchase.
  Parts which are required as part of normal vehicle maintenance are warranted against manufacturing defect at the time of installation. Consult your Holden Retailer to confirm the period of this warranty.

WARRANTY QUESTIONS AND ANSWERS

This section is designed to assist you in understanding the Holden Warranty provided with your new vehicle.

The following are some of the most frequently asked questions for which detailed answers are provided.

Q 1. How do I go about obtaining Holden Warranty service?

It is the responsibility of the Selling Retailer to provide Holden Warranty service, therefore, you should take your vehicle to the Selling Retailer whenever Holden Warranty service is needed. However, if this is not possible, you may go to any other Authorised Holden Retailer. The details recorded inside the front cover of the service booklet will be required by the Retailer.

Q 2. What should I do if my vehicle becomes unsafe or inoperative as a result of a defect which is covered by the Holden New Vehicle Warranty?

You should contact the nearest Authorised Holden Retailer or Holden Customer Assistance Service (refer further in this chapter) as soon as possible, and arrange for that Retailer to carry out the required Holden Warranty Service.

Q 3. What should I do if, in an emergency, Holden Warranty service is required and an Authorised Holden Retailer is not available to provide such service at the time?

If, in an emergency, a repair, replacement or adjustment (covered by the Holden New Vehicle Warranty) is required to enable your vehicle to be operated safely and it is not practical for you to go to an Authorised Holden Retailer, the service (to the extent that it is necessary to enable your vehicle to be operated safely) may be performed by any other qualified mechanic or repairer. A claim for the reasonable cost may be made through the authorised Holden Retailer who would normally provide you with Holden Warranty service. You must also take your vehicle to the Authorised Holden Retailer for inspection of the service and / or completion of any required Holden Warranty service, as soon as possible.

Note: During normal business hours you should seek authorisation from your nearest Authorised Holden Retailer or Holden Customer Assistance Service, prior to repairs being commenced.

Q 4. Are damage or injury, loss of time, inconvenience, commercial or other direct or indirect loss covered by the Holden Warranty?

No, these items are not covered. Holden warranty only covers the repair, replacement or adjustment of those parts of your vehicle which are found to be defective in materials or workmanship. No other types of claim for compensation of any kind, even if the same resulted from a consequence of a defect in materials or workmanship in your vehicle, will be recognised under the Holden New Vehicle Warranty.

You may have rights under the law to claim compensation outside of the Holden New Vehicle Warranty, but any claim based on those rights should be separately pursued.

WARRANTY QUESTIONS AND ANSWERS cont.

Q 5. Will I have to pay for maintenance costs during the Warranty Period?

Maintenance costs are not covered by the Holden New Vehicle Warranty. The Maintenance Schedules in the service booklet (in your vehicle's glovebox) specify the *minimum* maintenance required for your vehicle operating under normal conditions.

The Maintenance items (except where they are required as a result of defects in materials or workmanship) for which you will have to pay include:

- Engine tune-up, including spark plugs replacement.
- Replacement of all filters (including LPG lock off filter – if fitted), engine and other belts, hoses (including LPG hoses – if fitted) wiper blades and clutch linings.
- Cleaning or flushing of fuel, coolant, brake, engine, transmission, differential, power steering etc., after 1500 km.
- Carbon and sludge removal.
- Maintenance servicing of emission control system devices.
- Adding to (or replacing) lubricants.
- Adding to (or replacing) air conditioning refrigerant, after 1500 km.
- Any necessary adjustments to drive belts, transmissions, clutch, park brake etc.
- Wheel balancing – after 5000 km.
- Wheel alignment.
- De-dusting or de-glazing of brake linings or pads – after 1500 km.
- Brake lining wear or damaged brake components due to lining wear.
- Clutch lining wear or damaged clutch components due to lining wear.
- Brake disc pad or disc wear.
- Battery recharging.
- Paint, bright metal finish and trim, due to normal deterioration.
- Body panel adjustment – after 1500 km.
- Door, or bonnet lock adjustments.
- Glass or channel adjustments – after 1500 km.
- Body rattle, squeaks and general tightening of bolts, fasteners and fittings – after 1500 km.
- Chipped glass or breakage.
- Torn or damaged floor mats or carpets.
- Normal wear and tear to trim components.

Q 6. Are my tyres covered by the Holden New Vehicle Warranty?

No. The tyres fitted to your vehicle are covered by a separate warranty provided by the tyre manufacturer. Any Authorised Holden Retailer will assist you by discussing any queries which you might have with respect to the tyre manufacturer's warranty with the tyre manufacturer's representative.

WARRANTY QUESTIONS AND ANSWERS cont.

Q 7. Will I have to pay for any costs or expenses in connection with the provision of Holden Warranty service?

All parts and labour used in carrying out Holden Warranty service at the premises of the servicing Holden Retailer are free of charge. Whenever Holden Warranty service is to be carried out by the servicing Holden Retailer it is your responsibility to deliver your vehicle to the servicing Holden Retailer's premises.

If, as a result of a defect which is covered by the Holden New Vehicle Warranty, your vehicle cannot be driven safely and you arrange for the nearest Authorised Holden Retailer to carry out the required Holden Warranty service, Holden will accept reasonable towing costs to move your vehicle to the nearest Holden Retailer's premises. Before employing a towing company, contact the nearest Holden Retailer and / or Holden Customer Assistance Service (refer to page 10 of this chapter) to obtain guidance.

Q 8. Would my vehicle's engine benefit from fuel additives, oil additives or coolant additives not marketed by Holden?

The use of break-in oil, tune-up compounds, friction-reducing compounds and other supplemental additives is not recommended; their use will not only increase operating costs, but may also be detrimental to the operation of your vehicle and may affect the validity of your New Vehicle Warranty.

Only the fluids and lubricants referred to in this handbook should be used.

UNAUTHORISED STATEMENTS IN RELATION TO HOLDEN PRODUCTS

No Holden Retailer or other person is authorised or permitted to give or make any statement, assertion or undertaking in relation to the quality, performance, characteristics, descriptions or fitness for any purpose of any Holden product or in connection with the supply of any Holden product, which is at variance with any written statement, assertion or undertaking on any of these subjects given or made by Holden in its published sales literature, and Holden does not accept any responsibility for such unauthorised action.

ROADSIDE ASSISTANCE

3 YEAR
24 HOUR ROADSIDE ASSISTANCE

Our commitment to your satisfaction

Holden's Roadside Assistance is part of the unequalled commitment by Holden to provide total motoring satisfaction.

From the moment delivery is made, our aim is to provide the finest possible ownership experience, from design through manufacturing to servicing and now beyond to the open road, Australia wide.

We hope the need never arises, but if it does, we'll be there to help through Holden Roadside Assistance.

How does Holden Roadside Assistance work?

Holden Roadside Assistance is provided by Holden Ltd and delivered by the collective resources of the Australian Automobile Clubs and Associations including the constituents of Assist Australia (AA). To request a copy of the terms and conditions, contact Customer Assistance Service Line on 1800 033 349.

Which vehicles are covered by the service?

As of 1st November 1993 all new Holden passenger and light commercial vehicles are covered for 36 months from the date of first registration.

Holden Roadside Assistance is extended to private and business vehicles, taxis, rental companies, all government and fleet operators.

What will Holden Roadside Assistance do for me?

Holden Roadside Assistance is designed to get you mobile on any road that is trafficable to normal two wheel drive vehicles. In the event of the unexpected happening, from your keys being locked in your vehicle to mechanical and accident advice, help is readily available by simply calling the toll free number 1800 817 100.

All Holden luxury vehicles receive the added benefits of Holden Roadside **Ultra** Assist which includes accommodation, alternative transport, rental vehicle, assistance in case of accident, theft and medical emergency and Australia wide vehicle recovery.

Can I upgrade to Roadside Ultra assist?

Yes, owners can upgrade to Holden Roadside **Ultra** Assistance for a fee by dialling 1800 645 668. To request a copy of the **Ultra** terms and conditions, contact Customer Assistance Service Line on 1800 033 349.

ROADSIDE ASSISTANCE cont.

When do the benefits begin?

Cover begins from the date of first registration. An interim card entitles you to immediately receive all the benefits of Holden Roadside Assistance.

Where can I get Roadside Assistance?

Holden Roadside Assistance is available to you at home, or at the roadside, anywhere in Australia, should you need it. In remote or sparsely populated areas you may experience delays in obtaining Roadside Assistance due to your location, the availability of the service provider and accessibility.

Is there a membership or joining fee?

No, Holden Roadside Assistance is complimentary with every new Holden passenger vehicle and light commercial vehicle for 36 months from the date of first registration.

What will Holden Roadside Assistance cost me?

Materials, fuel and spare parts must be paid for at the time of service. The service personnel attending will issue a receipt for these expenses. Reimbursement of expenses covered by Holden's warranty can be claimed by contacting your local Holden Retailer.

What happens if I sell my vehicle?

Holden Roadside Assistance stays with the vehicle, so if you sell your vehicle during the 36 month period, it is still eligible for the balance of the Holden Roadside Assistance. The new owner simply registers for the service by using the change of ownership form supplied in the Roadside Assistance booklet.

How do I call for assistance?

Simply call Holden Roadside Assistance toll free on 1800 817 100 from anywhere in Australia. For further information regarding the service and full terms and conditions, refer to the Roadside Assistance Kit in the glovebox or call the toll free Customer Assistance Service Line on 1800 033 349.

CUSTOMER ASSISTANCE

We want you to be happy with your new vehicle, together with the people you deal with while you have the vehicle.

Normally, any problems with the sales, operation, servicing or the validity of original equipment supplied with your vehicle will be handled by your Holden Retailer's Sales and Service Department.

We realise however that, with the best intentions, misunderstandings do occur sometimes.

Therefore, we suggest you discuss any concern with one of the Holden Retailer's management people. If you have not received satisfaction from the Sales Manager or Service Manager – go to the General Manager or to the Retailer Principal.

By now you should have satisfaction. If not, the Holden Customer Assistance office is at your disposal.

The Holden Customer Assistance representatives can be telephoned from anywhere within Australia for only the cost of a local call. The Melbourne area number is 9646 5466. Outside the Melbourne Metropolitan area, the number is 1800 033 349.

If your concern relates to parts / accessories and you have made contact with the Retailer or Distributor without satisfaction, you may contact Holden Service Parts Operations on (03) 9797 7341.

Naturally, telephoning is the quickest and the best way to contact. However, if you prefer to write the address is:

The Manager
Holden Customer Assistance Centre
GPO Box 1714
Melbourne, 3001.

Your letter should clearly outline your concern or query, and include the following:

- Your name and address.
- Telephone numbers, both private and business.
- Servicing Retailer's name and address.
- Vehicle model.
- Vehicle identification number (I.S.O.V.I.N.), refer to the inside front cover of the service booklet in your vehicle's glovebox.
- Date of purchase.
- Current odometer reading.

Most of this information will be found on the Vehicle Identification Certificate, located inside the front cover of the service booklet in your vehicle's glovebox.

Before you write however, remember that the telephone is the quicker and more efficient means of communication.

FOR NEW ZEALAND HOLDEN OWNERS

The information in this Owner's Handbook applies primarily to Australian Holden vehicles and there may be some differences to the Warranty and Owner Assistance provisions for New Zealand. Applicable details for New Zealand are set out in the Holden Warranty and Owner Assistance Information booklet enclosed in the New Zealand glovebox wallet.

For your convenience, a list of New Zealand Retailers is provided at the end of this Chapter.

☎ New Zealand Assistance can be reached on:

0800 HOLDEN (0800 465 336)

This number provides access to New Zealand Roadside Assistance as well as New Zealand Customer Assistance.

✉ If you prefer to write the address is:

The Manager
Holden Customer Assistance Centre
GPO Box 1714
Melbourne,
Australia, 3001.

AUSTRALIAN HOLDEN RETAILERS

N.S.W. Metropolitan

ARNCLIFFE
Suttons Motors Arncliffe P/L
93 Princes Highway
P: (02) 9335 9000 FAX: (02) 9335 9006

ARNDELL PARK
Heartland Holden
8 Holbeche Road
P: 13 10 18 FAX: (02) 9676 6255

ASHFIELD
Muirs Holden
252 Parramatta Road
P: (02) 9798 8888 Fax: (02) 9799 7010

BALGOWLAH
Peninsula Holden Balgowlah
164 Condamine Street
P: (02) 9949 1888 FAX (02) 9949 7237

BANKSTOWN
Peninsula Holden Bankstown
466 Chapel Road
P: (02) 9790 1234 Fax: (02) 9790 0033

BLACKTOWN
Heartland Holden
120~128 Sunnyholt Road
P: (02) 9622 7333 Fax: (02) 9671 7394

CAMDEN
Paul Wakeling Holden-Camden
33 Edward Street
P: (02) 4655 5000 Fax: (02) 4655 5001

CAMPBELLTOWN
Paul Wakeling Holden
Cnr Blaxland & Campbelltown Roads
P: (02) 4628 1444 Fax: (02) 4628 3262

CASTLE HILL
Heartland Holden
Cnr Victoria Ave/Windsor Rd
P: (02) 9894 6666 Fax: (02) 9894 5600

CHATSWOOD
Sundell Holden
Cnr Smith and Gibbes Street
P: (02) 9417 8431 Fax: (02) 9417 7552

CHULLORA
Suttons Motors (Chullora) P/L
Cnr Hume Hwy/Waterloo Rd
P: (02) 9642 0233 Fax: (02) 9642 7798

DEE WHY
Peninsula Holden Dee Why
Cnr May & Mooramba Roads
P: (02) 9982 1311 Fax: (02) 9982 3755

EAST SYDNEY
Suttons City Holden
101 Williams Street
P: (02) 9331 3377 Fax: (02) 9331 6312

FAULCONBRIDGE, BLUE MOUNTAINS
Blue Mountains Holden
435~437 Great Western Hwy
P: (02) 4751 1911 Fax: (02) 4751 2481

HOMEBUSH
Suttons Motors Homebush P/L
112 Parramatta Road
P: (02) 9746 4500 Fax: (02) 9746 7206

LAKEMBA
United Holden Lakemba
817 Canterbury Road
P: (02) 9740 5555 Fax: (02) 9740 5907

LANSVALE
Lansvale Holden
266~284 Hume Highway
P: (02) 9728 7333 Fax: (02) 9726 1085

LIVERPOOL
McGrath Holden
411~419 Hume Highway
P: (02) 9821 5000 Fax: (02) 9821 1993

PARRAMATTA
Heartland Holden
65 Church Street
P: (02) 9204 6666 Fax: (02) 9635 6346

PENNANT HILLS
Barry Smith Holden
343~355 Pennant Hills Road
P: (02) 9483 3333 Fax: (02) 9484 7475

PENRITH
Heartland Holden
39-47 Henry St
P: (02) 4732 1966 Fax: (02) 4721 5896

ROCKDALE
United Holden Rockdale
591 Princes Hwy
P: (02) 9567 0400 Fax: (02) 9597 0410

ROSEBERY
Suttons City Holden
Link Road
P: (02) 9931 3000 Fax: (02) 9931 3001

RYDE
Hunter Holden
603~619 Victoria Road
P: (02) 9808 9123 Fax: (02) 9809 6592

ST LEONARDS
Hunter Holden
4 Herbert Street
P: (02) 9906 4044 Fax: (02) 9439 4635

ST. MARY'S
Heartland Holden
Cnr Glossop & Harris Streets
P: (02) 9673 2111 Fax: (02) 9673 4932

AUSTRALIAN HOLDEN RETAILERS cont.

SUTHERLAND
McGrath Holden Sutherland
499~505 Princes Highway
P: (02) 9545 4811 Fax: (02) 9545 2533
WAITARA
Suttons Motors Waitara P/L
90 Pacific Hwy
P: (02) 9487 2222 Fax: (02) 9489 0009
WINDSOR
Hawkesbury Valley Holden
18 Macquarie Street
P: (02) 4577 4077 Fax: (02) 4577 2592

N.S.W. Country

ARMIDALE
Graham Betts Holden
103 Rusden Street
P: (02) 6772 9444 Fax: (02) 6772 5836
BALLINA
Quayside Motors
Cnr Ronan Place & Pacific Hwy
P: (02) 6686 5111 Fax: (02) 6686 8574
BATHURST
Bathurst Holden
Mitchell Highway
P: (02) 6331 2077 Fax: (02) 6331 9177
BEGA
Bega Valley Holden
Cnr Upper and Gibbs Sts
P: (02) 6492 2333 Fax: (02) 6492 3105
BLAYNEY
Blayney Holden
98 Adelaide Street
P: (02) 6368 2745 Fax: (02) 6368 3257
BOMBALA
Delcott Engineering Pty Ltd
Maybe Street
P: (02) 6458 3341 Fax: (02) 6458 3940
BOOROWA
Boowowa Auto Repairs
40 Marsden Street
P: (02) 6385 3305
BROKEN HILL
Donlee Motors Pty Ltd
Cnr Galena & Rakow Streets
P: (08) 8087 2463 Fax: (08) 8087 7971
CARDIFF
Kelly Holden
35~39 MacQuarie Road
P: (02) 4954 7733 Fax: (02) 4954 9407
CASINO
Quayside Motors
142 Barker Street
P: (02) 6662 2822 Fax: (02) 6662 2101
CESSNOCK
Geoff Boyd Holden
240~246 Maitland Road
P: (02) 4990 0555 Fax: (02) 4990 0575
COBAR
Cobar Holden
Cnr Lewis St & Louth Road
P: (02) 6836 4005 Fax: (02) 6836 3409
COFF'S HARBOUR
Geoff King Holden
Cnr Pacific Hwy and Thompson Road
P: (02) 6652 2288 Fax: (02) 6652 5360
COOMA
High Country Holden
66~70 Sharp Street
P: (02) 6452 1077 Fax: (02) 6452 1142
COONABARABRAN
Coonabarabran Holden
24 Charles Street
P: (02) 6842 1499 Fax: (02) 6842 2473
COONAMBLE
Moody's Motors
37 Aberford Street
P: (02) 6822 1161 Fax: (02) 6822 1624
COOTAMUNDRA
Jenkins Garage
111 Wallendoon Street
P: (02) 6942 2522 Fax: (02) 6942 1493
COROWA
Jasper Bros. Pty Ltd
245 Honour Avenue
P: (02) 6033 0391 Fax: (02) 6033 3319
COWRA
Waugoola Motors Pty Ltd
Kendal Street
P: (02) 6342 1800 Fax: (02) 6342 3614
CROOKWELL
Crookwell Autos
114 Goulburn Street
P: (02) 4832 1433 Fax: (02) 4832 2157
DENILIQUIN
Burchfield Bros & Co
112~114 End Street
P: (03) 5881 2133 Fax: (03) 5881 3322
DORRIGO
Phil Noble Motors
46~48 Hickory Street
P: (02) 6657 2017 Fax: (02) 6657 2217
DUBBO
Golden West Holden
54 Bourke Street
P: (02) 6882 1011 Fax: (02) 6882 7102

AUSTRALIAN HOLDEN RETAILERS cont.

DUNGOG
Turner Holden
1 Park Street
P: (02) 6558 1108 Fax: (02) 6558 2317
EDEN
Ron Doyle
113 Princes Highway
P: (02) 6496 1420 Fax: (02) 6496 1467
FINLEY
Riverina Holden
104 Murray Street
P: (03) 5883 1211 Fax: (03) 5883 1638
FORBES
Frank Spice Holden
20~22 Dowling Street
P: (02) 6851 1755 Fax: (02) 6852 2825
GATESHEAD
Brian Kelly Holden
39 Pacific Highway
P: (02) 4920 7000 Fax: (02) 4920 8008
GILGANDRA
Gilgandra Holden
1 Morris Street
P: (02) 6847 1888 Fax: (02) 6847 1277
GLEN INNES
Glen Severn Holden
167 Grey Street
P: (02) 6732 2888 Fax: (02) 6732 3394
GLOUCESTER
Turner Holden
1 Park Street
P: (02) 6558 1108 Fax: (02) 6558 2317
GOSFORD
Barry Robertson Holden
10 Pacific Highway
P: (02) 4325 0511 Fax: (02) 4324 1043
GOULBURN
Geissler Motors
279~298 Auburn Street
P: (02) 4821 3744 Fax: (02) 4821 9798
GRAFTON
Ken Casson Holden
37~39 Turf Street
P: (02) 6642 6666 Fax: (02) 6642 6737
GRIFFITH
Leo Franco Holden
164~166 Yambil Street
P: (02) 6964 2977 Fax: (02) 6962 4916
GUNNEDAH
Namoi Valley Motors
48 Barber Street
P: (02) 6742 0211 Fax: (02) 6742 3842
HARDEN
Ginty & O'Leary
Cnr Station & Albury Streets
P: (02) 6386 2320 Fax: (02) 6386 2722
HAY
Royce Curtis Motors
168 Lachlan Street
P: (02) 6993 1503 Fax: (02) 6993 2212
HOLBROOK
Lieschke Motors Pty Ltd
78 Albury Street
P: (02) 6036 2244 Fax: (02) 6036 2831
INVERELL
Gaukroger Sales Pty Ltd
28-30 Vivian Street
P: (02) 6722 2722 Fax: (02) 6722 1804
KANDOS
Chrisfield Holden
11 Angus Street
P: (02) 6379 4204 Fax: (02) 6379 4606
KEMPSEY
Thoroughgood Holden
118~132 Belgrave Street
P: (02) 6562 1381 Fax: (02) 6562 1383
KIAMA
Glen Fulton Holden
35~41 Collins Street
P: (02) 4232 1888 Fax: (02) 4232 3062
KYOGLE
O & H Holden
128~134 Summerland Way
P: (02) 6632 1711 Fax: (02) 6632 2552
LEETON
John Ryan Holden
47~51 Pine Avenue
P: (02) 6953 2466 Fax: (02) 6953 6725
LISMORE
Quayside Motors
30 Ballina Road
P: (02) 6621 1888 Fax: (02) 6622 4659
LITHGOW
Lithgow City Holden
255 Main Street
P: (02) 6351 4555 Fax: (02) 6351 4653
MACKSVILLE
Eastland Holden
18~22 Cooper Street
P: (02) 6568 1711 Fax: (02) 6568 1816
MACLEAN
O'Halloran Motors
175 River Street
P: (02) 6645 2844 Fax: (02) 6645 4003
MAITLAND
Heritage Holden
Cnr New England Hwy & Bungaree St
P: (02) 4932 0779 Fax: (02) 4932 0473
MOREE
Keith Haddad Holden
Cnr Boston & Heber Streets
P: (02) 6752 1855 Fax: (02) 6752 1298

AUSTRALIAN HOLDEN RETAILERS cont.

MORUYA
Surfair Holden
88 Vulcan Street
P: (02) 4474 2555 Fax: (02) 4474 2129
MOSS VALE
Moss Vale Holden
160~162 Argyle Street
P: (02) 4868 1055 Fax: (02) 4868 3330
MUDGEE
Ross Granata Motors
32 Sydney Road
P: (02) 6372 1766 Fax: (02) 6372 3735
MULLUMBIMBY
Tony Carsburg Holden
2 Argyle Street
P: (02) 6684 2066 Fax: (02) 6684 4593
MURWILLUMBAH
Twin Towns Holden
29 Prospero Street
P: (02) 6672 4444 Fax: (02) 6672 5811
MUSWELLBROOK
Upper Hunter Motors Pty Ltd
116 Bridge Street
P: (02) 6543 2577 Fax: (02) 6543 2565
NARROMINE
Narromine Holden
45~51 Dandaloo Street
P: (02) 6889 1244 Fax: (02) 6889 2277
NARRABRI
Allan Cooper Holden
181 Maitland Street
P: (02) 6792 3488 Fax: (02) 6792 4750
NEWCASTLE
Newcastle City Holden
King Street (Cnr Stewart Ave)
P: (02) 4961 5301 Fax: (02) 4961 6485
NOWRA
Glendon Motors Holden
301~313 Princes Highway
P: (02) 4421 0144 Fax: (02) 4423 0854
ORANGE
Canobolas Holden
Cnr Summer St & Endsleigh Ave
P: (02) 6362 0155 Fax: (02) 6361 3702
PARKES
Broderick Motors Holden
Cnr Mitchell & Clarinda Sts
P: (02) 6862 2266 Fax: (02) 6862 1406
PORT MACQUARIE
Bob Todd Motors Pty Ltd
115 Gordon Street
P: (02) 6583 1100 Fax: (02) 6584 9508
QUIRINDI
Browning Motors
82 Henry Street
P: (02) 6746 1666 Fax: (02) 6746 1422
SCONE
Upper Hunter Motors (Scone)
100 Liverpool Street
P: (02) 6545 1355
SINGLETON
Lancaster Holden
80 John Street
P: (02) 6578 8700 Fax: (02) 6578 8733
TAMWORTH
Kensell's Holden
Cnr Bourke St & Kable Ave
P: (02) 6766 6699 Fax: (02) 6766 7339
TAREE
Cullen Holden
21~25 Victoria Street
P: (02) 6552 2222 Fax: (02) 6552 1269
TEMORA
Rod Lovering Holden
607-608 Stockinbingal Road
P: (02) 6977 2255 Fax: (02) 6977 2033
TENTERFIELD
Sexton & Green (Sales & Service) P/L
148 Rouse Street
P: (02) 6736 1855 Fax: (02) 6736 1946
TUGGERAH
Barry Robertson Holden
172 Pacific Highway
P: (02) 4351 2588 Fax: (02) 4352 1759
TUMUT
Holden Tumut Service Centre
52 Adelong Road
P: (02) 6947 6374 Fax: (02) 6947 6314
TUNCURRY
Cullen Holden
144 Manning Street
P: (02) 6555 6644 Fax: (02) 6555 7433
TWEED HEADS
Von Bibra Twin Towns Holden
75-79 Pacific Highway
P: (07) 5536 3411 Fax: (07) 5536 4490
ULLADULLA
Alan May Holden
169 Princes Highway
P: (02) 4455 1166 Fax: (02) 4455 4122
WAGGA WAGGA
Wagga Motors Pty Ltd
32 Dobney Avenue
P: (02) 6925 3411 Fax: (02) 6925 3283
WALGETT
Walgett Garage Pty Ltd
81 Wee Waa Street
P: (02) 6828 1088 Fax: (02) 6828 1198
WALLA WALLA
D.E. Lieschke & Son Pty Ltd
63 Commercial Road
P: (02) 6029 2202 Fax: (02) 6029 2134

AUSTRALIAN HOLDEN RETAILERS cont.

WARIALDA
Roger Moore
Hope Street
P: (02) 6729 1570 Fax: (02) 6729 1104
WARILLA
Wilson's Holden
29 Shellharbour Road
P: (02) 4295 1223 Fax: (02) 4296 1007
WARREN
Fuller Bros
Dubbo Street
P: (02) 6847 4978 Fax: (02) 6847 4477
WELLINGTON
Gersbach's Garage Pty Ltd
92 Lee Street
P: (02) 6845 2733 Fax: (02) 6845 3236
WEST WYALONG
West Wyalong Motors
183 Main Street
P: (02) 6972 2388 Fax: (02) 6972 2570
WOLLONGONG
Dwyers City Holden
31~33 Crown Street
P: (02) 4229 9222 Fax: (02) 4229 5105
YOUNG
Harden & Geelan Holden
30 Boorowa Street
P: (02) 6382 1155 Fax: (02) 6382 4673

A.C.T.

BELCONNEN
Gerald Slaven Holden
2 Josephson Street
P: (02) 6251 5111 Fax: (02) 6253 1298
BRADDON
Rolfe Holden
44 Mort Street
P: (02) 6248 7888 Fax: (02) 6257 1328
PHILLIP
Commonwealth Motors Pty Ltd
158 Melrose Drive
P: (02) 6282 3522 Fax: (02) 6282 5214

Tas.

BURNIE
Motors Burnie
Marine Terrace
P: (03) 6431 1122 Fax: (03) 6431 3146
DEVONPORT
Motors Devonport
Victoria Parade
P: (03) 6424 4033 Fax: (03) 6424 5249
HOBART
Motors Pty Ltd
179 MacQuarie Street
P: (03) 6230 7307 Fax: (03) 6230 7380

Vic. Metropolitan

BACCHUS MARSH
Alan Mance Holden Bacchus March
4 Graham Street
P: (03) 5367 4300 Fax: (03) 53674299
BERWICK
Barry Bourke Holden
755 Princes Highway
P: (03) 9707 2222 Fax: (03) 9707 3091
BUNDOORA
Watson Holden
413 Grimshaw Street
P: (03) 9467 4677 Fax: (03) 9467 7661
BURWOOD
Penfold Holden
142 Burwood Highway
P: (03) 9268 1333 Fax: (03) 9268 1335
CHELSEA
Harrison Holden
370 Nepean Highway
P: (03) 9772 2233 Fax: (03) 9772 2190
CHELTENHAM
Booran Holden
1212 Nepean Highway
P: (03) 9584 3333 Fax: (03) 9584 4285
DANDENONG
Booran Holden
17 Lonsdale Street
P: (03) 9794 5455 Fax: (03) 9792 4871
DONCASTER
Doncaster Holden
808 Doncaster Road
P: (03) 9848 1330 Fax: (03) 9848 1331
ELSTERNWICK
Summit Holden
67 Nepean Highway
P: (03) 9528 2222 Fax: (03) 9532 8636
ESSENDON
Preston Motors (Essendon) P/L
205~211 Keilor Road
P: (03) 9374 2888 Fax: (03) 9379 6754
FAWKNER
Mantello Holden
1263 Sydney Road
P: (03) 9359 1333 Fax: (03) 9359 9334

AUSTRALIAN HOLDEN RETAILERS cont.

FERNTREE GULLY
Ferntree Gully Holden
980 Burwood Highway
P: (03) 9753 1222 Fax: (03) 9753 1242
FOOTSCRAY
Alan Mance Holden
435 Barkly Street
P: (03) 9396 8000 Fax: (03) 9396 8001
FRANKSTON
Bay City Holden
140 Dandenong Road
P: (03) 9784 4444 Fax: (03) 9784 4419
GLENHUNTLY
Booran Holden
1234 Glenhuntly Road
P: (03) 9571 9313 Fax: (03) 9571 8374
GLEN WAVERLEY
Barloworld Holden
565~577 Springvale Road
P: (03) 9550 5888 Fax: (03) 9550 5855
HEIDELBERG
Ralph D'Silva Holden
112 Bell Street
P: (03) 9479 4088 Fax: (03) 9450 2909
LILYDALE
Heritage Holden
344 Main Street
P: (03) 9735 5566 Fax: (03) 9735 1040
MELTON
Alan Mance Holden
1 Holland Drive
P: (03) 9746 9666 Fax: (03) 9746 9555
MORNINGTON
John Collins Holden
976 Nepean Highway
P: (03) 5975 4433 Fax: (03) 5975 4720
OAKLEIGH
Garry & Warren Smith
1575 Dandenong Road
P: (03) 9568 6333 Fax: (03) 9568 5691
PRESTON
Ralph D'Silva Holden
573~603 High Street
P: (03) 9471 0500 Fax: (03) 9478 3103
RINGWOOD
Patterson Cheney Holden
45~57 Maroondah Highway
P: (03) 9262 6666 Fax: (03) 9870 1113
ROXBURGH PARK
Mantello Holden Roxburgh Park
215 Somerton Road
P: (03) 9930 4444 Fax: (03) 9930 4400
SOUTH MELBOURNE
South City Holden
380 City Road
P: (03) 9627 3333 Fax: (03) 9682 6888
SOUTH YARRA
Penfold Holden
681 Chapel Street
P: (03) 9827 2272 Fax: (03) 9826 5328
SUNBURY
Sunbury Holden
93~95 Horne Street
P: (03) 9740 3000 Fax: (03) 9740 4777
SUNSHINE
Kevin Dennis Holden
272 Ballarat Road
P: (03) 9292 9292 Fax: (03) 9292 9200
WERRIBEE
Ballan Holden
56 Princes Highway
P: (03) 9974 8888 Fax: (03) 9974 8899
WEST MELBOURNE
Summit Holden
577 King Street
P: (03) 9329 6611 Fax: (03) 9329 1550

Vic. Country

ALEXANDRA
Alexandra Total Automotive Services
120 Grant Street
P: (03) 5772 1588 Fax: (03) 5772 1978
ARARAT
David Reid Motors
High Street
P: (03) 5352 4100 Fax: (03) 5352 4388
BAIRNSDALE
The Big Garage
628 Princes Highway
P: (03) 5152 4131 Fax: (03) 5152 5313
BALLARAT
Peter Amor Motors
211 Gillies Street
P: (03) 5339 9333 Fax: (03) 5339 9202
BENALLA
Arnott's Motors
88~90 Bridge Street
P: (03) 5762 2500 Fax: (03) 5762 1586
BENDIGO
Ron Poyser Holden
Cnr High & Myrtle Streets
P: (03) 5442 3999 Fax: (03) 5442 7766
CAMPERDOWN
Camperdown Auto Parts
96 Manifold Street
P: (03) 5593 1983 Fax: (03) 5593 1979

AUSTRALIAN HOLDEN RETAILERS cont.

CASTERTON
Coxons Holden
139 Henty Street
P: (03) 5581 1166 Fax: (03) 5581 2116

CHARLTON
Walsh Motors, Charlton
70~74 High Street
P: (03) 5491 1444 Fax: (03) 5491 1984

COBRAM
Neville Mustica Motors
Murray Valley Hwy
P: (03) 5872 1666 Fax: (03) 5872 1920

COHUNA
Hare Motors Holden
105~107 King George Street
P: (03) 5456 4488 Fax: (03) 5456 4448

COLAC
Parker Bros. Motor Co
224 Murray Street
P: (03) 5231 5533 Fax: (03) 5231 3853

DAYLESFORD
K.R. Little
Vincent Street
P: (03) 5348 2248

DONALD
O.A. Shilton & Sons Pty Ltd
5 Woods Street
P: (03) 5497 1400 Fax: (03) 5497 1505

ECHUCA
Echuca Motors
1 Nothern Highway
P: (03) 5482 1522 Fax: (03) 5480 6215

EUROA
Parker Bros Auto Co. Euroa
37~41 Clifton Street
P:(03) 5795 2702 Fax: (03) 5795 1288

GEELONG
R & B Smith Holden
510 Moorabool Street
P: (03) 5222 2888 Fax: (03) 5221 3114

GEELONG
Winter & Taylor Holden
23 Cavendish Street
P: (03) 5222 1811 Fax: (03) 5221 1873

HAMILTON
Bloods of Hamilton
210 Gray Street
P: (03) 5572 1433 Fax: (03) 5571 1182

HASTINGS
John Collins Holden
2041 Frankston-Flinders Road
P: (03) 5979 4433 Fax: (03) 5975 4720

HOPETOUN
Hopetoun Motors
78 Lascelles Street
P: (03) 5083 3143 Fax: (03) 5083 3290

HORSHAM
Ivan Morrow Motors Pty Ltd
22 O'Callaghans Parade
P: (03) 5382 0185 Fax: (03) 5382 0459

KANIVA
Kaniva Motors
82 Commercial Street
P: (03) 5392 2300 Fax: (03) 5392 2589

KOO WEE RUP
G & J Light Mechanical Repairs P/L
Station Road
P: (03) 5997 1325

KORUMBURRA
Peter Dunlevie Holden
42 Commercial Street
P: (03) 5655 1288 Fax: (03) 5655 1839

KYABRAM
D'Alberto Holden
60 McEwen Road
P: (03) 5852 1366 Fax: (03) 5852 1337

KYNETON
Mollison Motors Pty Ltd
167 Mollison Street
P: (03) 5422 3377 Fax: (03) 5422 3501

LEONGATHA
Gleeson Holden
37~43 Bair Street
P: (03) 5662 2361 Fax: (03) 5655 1839

MANSFIELD
Martin's Garage
52~54 Chenery Street
P: (03) 5775 2610 Fax: (03) 5775 1179

MARYBOROUGH
Graham Jacka Holden
35 Nolan Street
P: (03) 5461 1011 Fax: (03) 5461 4789

MILDURA
Stuart & Harrison (Sales) Pty Ltd
24~40A Deakin Avenue
P: (03) 5023 0051 Fax: (03) 5021 3076

MURRAYVILLE
Peers Motors
McKenzie Street
P: (03) 5095 2081 Fax: (03) 5095 2054

NHILL
Ivan Morrow Motors Pty Ltd
71~73 Nelson Street
P: (03) 5391 1333 Fax: (03) 5391 1228

PORTLAND
Reynolds of Portland
Henty Highway
P: (03) 5523 1688 Fax: (03) 5523 6299

ROCHESTER
Bruce Hocking Motors Pty Ltd
85 Lowry Street
P: (03) 5484 1455 Fax: (03) 5484 1140

AUSTRALIAN HOLDEN RETAILERS cont.

RUTHERGLEN
Jasper Bros Pty Ltd
62 Main Street
P: (02) 6032 8404 Fax: (02) 6032 8156

SALE
Sam Gould Holden
29~33 Foster Street
P: (03) 5144 3944 Fax: (03) 5144 6289

SEYMOUR
Neil Beer Holden
49 Emily Street
P: (03) 5792 2777 Fax: (03) 5792 4111

SHEPPARTON
Parker Bros. Auto Co.
182-196 Benalla Road
P: (03) 5822 2666 Fax: (03) 5831 2507

STAWELL
Howden Holden
72~74 Longfield Street
P: (03) 5358 1888 Fax: (03) 5358 3954

SWAN HILL
Swan Hill Holden
94~102 Campbell Street
P: (03) 5033 1800 Fax: (03) 5032 2468

TALLANGATTA
Crispin Motors
21 Towong Street
P: (02) 6071 2414 Fax: (02) 6071 2655

TERANG
W. Christian (Terang) Pty Ltd
6a Baynes Street
P: (03) 5592 1588 Fax: (03) 5592 1481

TIMBOON
Timboon Motors
56 Bailey Street
P: (03) 5598 3007 Fax: (03) 5598 3362

TRARALGON
Colin Watson Holden
Princes Highway
P: (03) 5175 7000 Fax: (03) 5175 0050

UNDERBOOL
A.J. Gloster & Sons
Cotter Street
P: (03) 5094 6291 Fax: (03) 5094 6297

WANGARATTA
Alan Capp (New Cars) Pty Ltd
29 Tone Road
P: (03) 5721 2133 Fax: (03) 5721 4626

WARRACKNABEAL
Amor Motors Aubrey Truck Sales
33 Woolcock Street
P: (03) 5394 1055 Fax: (03) 5398 1904

WARRAGUL
Barry Bourke Warragul
167 Queen Street
P: (03) 5622 0000 Fax: (03) 5622 0333

WARRNAMBOOL
Callaghan Motors Pty Ltd
133~137 Fairy Street
P: (03) 5561 8700 Fax: (03) 5561 8740

WODONGA
McRae White Motors
182 Melbourne Road
P: (02) 6056 2333 Fax: (02) 6024 7899

WONTHAGGI
Wonthaggi Holden
2 Murray Street
P: (03) 5672 1122 Fax: (03) 5672 4141

YARRAM
John Palmer Holden
150 Commercial Road
P: (03) 5182 5122 Fax: (03) 5182 6166

YARRAWONGA
Pigdons
155 Belmore Street
P: (03) 5743 1577 Fax: (03) 5744 1788

Qld. Metropolitan

ASPLEY
Zupps Aspley Pty Ltd
1454 Gympie Road
P: (07) 3246 8000 Fax: (07) 3246 8092

BROWNS PLAINS
Zupps Hillcrest
Cnr Anzac Ave & Corporate Place, Hillcrest,
P: (07) 3802 4000 Fax: (07) 3802 4099

CAPALABA
Oldfield Holden
103 Redland Bay Road
P: (07) 3245 2200 Fax: (07) 3245 2221

HILLCREST
Zupps Hillcrest
Cnr Anzac Avenue and Corporate Place
P: (07) 3802 4000 Fax: (07) 3802 4099

INDOOROOPILLY
Westpoint Holden
440 Moggill Road
P: (07) 3878 0440 Fax: (07) 3878 1340

IPSWICH
Ross Llewellyn Holden
246 Brisbane Road
P: (07) 3282 2922 Fax: (07) 3282 6359

LAIDLEY
Buhse's Garage
5 Spicer Street
P: (07) 5465 1406 Fax: (07) 5465 1706

MOOROOKA
John Sivyer Holden
1060 Ipswich Road
P: (07) 3892 3344 Fax: (07) 3848 8866

AUSTRALIAN HOLDEN RETAILERS cont.

MT. GRAVATT
Zupps Motors Pty Ltd
1310 Logan Road
P: (07) 3877 0000 Fax: (07) 3877 0063
NEWSTEAD
Eagers Holden
95 Breakfast Creek Road
P: (07) 3364 1199 Fax: (07) 3364 1060
PETRIE
Village Motors
1059 Gympie Road
P: (07) 3285 2244 Fax: (07) 3285 1975
REDCLIFFE
Village Holden
425 Elizabeth Avenue
P: (07) 3883 0900 Fax: (07) 3883 2711
SPRINGWOOD
Motorama Holden
3455 Pacific Highway
P: (07) 3804 4888 Fax: (07) 3208 7018
WINDSOR
Eagers Holden
143 Newmarket Road
P: (07) 3357 6711 Fax: (07) 3357 5403
WOOLLOONGABBA
Armstrong Holden
73 Ipswich Road
P: (07) 3891 5522 Fax: (07) 3891 5146
WYNNUM
Doug Barton Holden
200 Tingal Road
P: (07) 3396 7777 Fax: (07) 3393 3593

Qld. Country

ATHERTON
Redding Motors Pty Ltd
2 Cook Street
P: (07) 4091 1344 Fax: (07) 4091 2039
AYR
Honeycombes Sales & Service
213~217 Queen Street
P: (07) 4783 2344 Fax: (07) 4783 2079
BEAUDESERT
Zupps Beaudesert
57 Brisbane Street
P: (07) 5541 2000 Fax: (07) 5541 3368
BILOELA
Andersons Auto City
Dawson Highway
P: (07) 4992 2833 Fax: (07) 4992 3066
BOWEN
McDermott Holden
98 Herbert Street
P: (07) 4786 1430 Fax: (07) 4786 2903
BUNDABERG
Ross Gray Holden
Takalvan Street
P: (07) 4150 1333 Fax: (07) 4150 1318
CABOOLTURE
Beecham Holden
Bribie Island Road
P: (07) 5495 1477 Fax: (07) 5495 2839
CAIRNS
Ireland Holden
227~233 Mulgrave Road
P: (07) 4052 3666 Fax: (07) 4052 3606
CALOUNDRA
Caloundra City Holden
45 Caloundra Road
P: (07) 5491 5522 Fax: (07) 5491 8016
CHARTERS TOWERS
Tony Ireland Holden
57 Mosman Street
P: (07) 4787 1177 Fax: (07) 4787 4858
CHINCHILLA
Ainsworth Motors & Machinery Pty Ltd
55 Chinchilla Street
P: (07) 4662 7286 Fax: (07) 4662 7197
DALBY
Johnson's Holden
36 Drayton Street
P: (07) 4662 2422 Fax: (07) 4662 4311
EMERALD
Emerald Holden
Hospital Road
P: (07) 4983 9888 Fax: (07) 4983 9889
GATTON
Gatton Auto Centre
67 Railway Street
P: (07) 5462 1633 Fax: (07) 5462 1980
GLADSTONE
Andersons Auto City
56 Yarroon Street
P: (07) 4972 1177 Fax: (07) 4972 9141
GOONDIWINDI
Goondiwindi Holden
45 Russell Street
P: (07) 4671 0266 Fax: (07) 4671 0288
GYMPIE
Madills Holden
35 Mellor Street
P: (07) 5480 5500 Fax: (07) 5482 2672
HERVEY BAY
Whitaker Holden
96 Torquay Road
P: (07) 4128 1722
INGHAM
Devietti Holden
99 Lannercost Street
P: (07) 4776 1599 Fax: (07) 4776 3547

AUSTRALIAN HOLDEN RETAILERS cont.

INNISFAIL
I.C. Taylor Pty Ltd
117 Edith Street
P: (07) 4061 1577 Fax: (07) 4061 3963
JULIA CREEK
Julia Creek Motors Pty Ltd
Burke Street
P: (07) 4746 7155 Fax: (07) 4746 7197
KILCOY
Hobart's Garage
58 Mary Street
P: (07) 5497 1204 Fax: (07) 5497 1204
KINGAROY
John Dundas Pty Ltd
79 Kingaroy Street
P: (07) 4162 1722 Fax: (07) 4162 3756
LONGREACH
Longreach Motors
33 Swan Street
P: (07) 4658 1700 Fax: (07) 4658 1857
MACKAY
Pioneer Holden
Cnr Gordon & Wellington Streets
P: (07) 4969 4299 Fax: (07) 4969 4288
MAROOCHYDORE
Sunco Holden
Wises Road
P: (07) 5456 8000 Fax: (07) 5456 8099
MARYBOROUGH
Whitaker Holden
109~111 March Street
P: (07) 4122 2255 Fax: (07) 4122 6222
MOUNT ISA
Bruce Marles Motor City
Marian Street
P: (07) 4743 3044 Fax: (07) 4743 8466
MURGON
Clifton Motors
Macalister Street
P: (07) 4168 1066 Fax: (07) 4168 1947
NAMBOUR
Sunco Holden Nambour
Bruce Highway
P: (07) 5451 2000 Fax: (07) 5451 2099
NANANGO
Nanango Motors Pty Ltd
102 Drayton Street
P: (07) 4163 1108 Fax: (07) 4163 1108
NOOSAVILLE
Madill's
Lot 1 Lionel Donovan Drive
P: (07) 5449 7900 Fax: (07) 5474 0073
PROSERPINE
Crossley Car Sales Whitsunday Pty Ltd
162~164 Main Street
P: (07) 4945 1822 Fax: (07) 4945 2022
ROBINA
Robina Holden
16 Brabham Circuit
P: (07) 5575 0500 Fax: (07) 5562 1072
ROCKHAMPTON
Lawrence's
327 Richardson Road
P: (07) 4930 5111 Fax: (07) 4930 5112
ROMA
Maranoa Multi Agencies
Bowen Street
P: (07) 4622 2900 Fax: (07) 4622 1832
SOUTHPORT
Lockhart Holden
Cnr Nerang Road & Olsen Avenue
P: (07) 5597 2900 Fax: (07) 5597 2542
SPRINGSURE
Springsure Motors
Eclipse Street
P: (07) 4984 1177 Fax: (07) 4984 1361
ST. GEORGE
Halpin Motors
39~41 Grey Street
P: (07) 4625 5466 Fax: (07) 4625 5855
STANTHORPE
Central Motors
42 Maryland Street
P: (07) 4681 2200 Fax: (07) 4681 1479
TOOWOOMBA
Toowoomba Holden
Cnr James & Hume Streets
P: (07) 4690 0900 Fax: (07) 4690 0909
TOWNSVILLE
Tony Ireland Holden
87~91 Charters Towers Road
P: (07) 4726 7777 Fax: (07) 4721 1486
TULLY
Island Coast Holden
Bruce Highway
P: (07) 4068 1288 Fax: (07) 4068 2145
WARWICK
Deighton Motors Pty Ltd
Grafton Street
P: (07) 4661 2266 Fax: (07) 4661 1275

N.T.

ALICE SPRINGS
Peter Kittle Holden
46 Stuart Highway
P: (08) 8952 5500 Fax: (08) 8953 0847
DARWIN
Kerry Holden
21~25 Stuart Highway
P: (08) 8980 8080 Fax: (08) 8980 8081

AUSTRALIAN HOLDEN RETAILERS cont.

KATHERINE
Wyn Holden
Lot 2399 Victoria Highway
P: (08) (08) 8972 2422 Fax: (08) 8971 0571
TENNANT CREEK
Kittles Holden
Paterson Street
P: (08) 8962 2251 Fax: (08) 8962 2527

S.A. Metropolitan

ADELAIDE
City Holden
221 Grenfell Street
P: (08) 8223 7666 Fax: (08) 8359 2588
ELIZABETH
Peter Page Holden
17 Elizabeth Way
P: (08) 8255 1288 Fax: (08) 8255 9260
GAWLER
Steinborner Holden
Cnr Murray & Bridge Sts
P: (08) 8522 4222 Fax: (08) 8522 4898
HILLCREST
City Holden
327~329 Main North East Road
P: (08) 8261 5855 Fax: (08) 8369 0066
MALVERN
Claridge Holden
361~367 Unley Road
P: (08) 8272 1600 Fax: (08) 8373 0057
PORT ADELAIDE
Smiths of Port Adelaide
271 Commercial Road
P: (08) 8400 7100 Fax: (08) 8400 7155
PROSPECT
Metro Holden
84~88 Main North Road
P: (08) 8343 5000 Fax: (08) 8344 9670
REYNELLA
Southgate Holden
49~59 Main South Road
P: (08) 8381 9555 Fax: (08) 8381 6274
ROSE PARK
City Holden
14 Kensington Road
P: (08) 8334 4666 Fax: (08) 8334 4610
SOMERTON PARK
Hamilton Holden
278~288 Brighton Road
P: (08) 8179 4300 Fax: (08) 8358 3957
THEBARTON
Metro Holden
1 Port Road
P: (08) 8354 9555 Fax: (08) 8443 6855
VALLEY VIEW
Plaza Holden
817~839 North East Road
P: (08) 8263 4922 Fax: (08) 8265 5200

S.A. Country

BALAKLAVA
Balaklava Motors
4 Wallace Street
P: (08) 8862 1030 Fax: (08) 8862 2000
BERRI
Rosenthal Bros Pty Ltd
Vaughan Terrace
P: (08) 8582 3644 Fax: (08) 8582 3515
BORDERTOWN
Farmers Centre
South Terrace
P: (08) 8752 0266 Fax: (08) 8752 0233
CEDUNA
Beck Motors Pty Ltd
Poynton Street
P: (08) 8625 2616 Fax: (08) 8625 3201
CLARE
Mid North Motor Company Pty Ltd
7 Old North Road
P: (08) 8842 2200 Fax: (08) 8842 2886
CLEVE
Pringles Ag. Plus
Rudall Road
P: (08) 8628 2150 Fax: (08) 8628 2537
CRYSTAL BROOK
Crouch Rural Pty Ltd
26 Brandis Street
P: (08) 8636 2257 Fax: (08) 8636 2088
KADINA
J.H. Rosewarne Pty Ltd
Graves Street
P: (08) 8821 1111 Fax: (08) 8821 1686
KEITH
Farmers Centre
McBain Street
P: (08) 8755 3222 Fax: (08) 8755 3211
KINGSTON
Lecornu's Service Garage
Agnes Street
P: (08) 8767 2424 Fax: (08) 8767 2533
LOXTON
Flight Motors Pty Ltd
Bookpurnong Terrace
P: (08) 8584 7277 Fax: (08) 8584 5937
MINLATON
Southway
9 Fifth Street
P: (08) 8853 2322 Fax: (08) 8853 2451

AUSTRALIAN HOLDEN RETAILERS cont.

MENINGIE
Peter Hood Holden
Cnr Princes Highway & Coonalpyn Road
P: (08) 8575 1109 Fax: (08) 8575 1537
MT. BARKER
Gilbert Motors
57 Adelaide Road
P: (08) 8391 1500 Fax: (08) 8398 2124
MT. GAMBIER
O.G. Roberts & Co
Jubilee Highway West
P: (08) 8724 1111 Fax: (08) 8724 1100
MURRAY BRIDGE
Dutton Motors Pty Ltd
7 Adelaide Road
P: (08) 8532 1999 Fax: (08) 8531 0599
NARACOORTE
Kingcraig Motors Pty Ltd
158~164 Smith Street
P: (08) 8762 1555 Fax: (08) 8762 1806
PORT AUGUSTA
Augusta Motor Company Pty Ltd
38 Stirling Road
P: (08) 8641 0488 Fax: (08) 8642 4300
PORT LINCOLN
City Motors
King Street
P: (08) 8682 1100 Fax: (08) 8682 4734
PORT PIRIE
Spencer Motors Pty Ltd
50 Ellen Street
P: (08) 8632 3888 Fax: (08) 8632 6405
RENMARK
Rosenthal Motors Pty Ltd
Ral Ral Avenue
P: (08) 8586 6626 Fax: (08) 8586 4040
TANUNDA
Hage & Co Pty Ltd
50 Murray Street
P: (08) 8563 2123 Fax: (08) 8563 3488
VICTOR HARBOR
Southern Motors Holden
5 Victoria Street
P: (08) 8552 1255 Fax: (08) 8552 2788
WAIKERIE
Riverside Holden
6 Crush Terrace
P: (08) 8541 2900 Fax: (08) 8541 3325
WHYALLA
McLeods Whyalla Motor Company
64 Essington Lewis Avenue
P: (08) 8645 7388 Fax: (08) 8645 5512
YORKETOWN
Southway Holden
Minalaton Road
P: (08) 8852 1322 Fax: (08) 8852 1271

W.A. Metropolitan

CANNINGTON
Brian Gardner Holden
1308~1324 Albany Hwy
P: (08) 9356 9000 Fax: (08) 9458 9144
FREMANTLE
Shacks Holden
64 Queen Victoria Street
P: (08) 9432 9432 Fax: (08) 9432 9456
GOSNELLS
Gibbons Holden
2325 Albany Highway
P: (08) 9398 2211 Fax: (08) 9398 5683
MELVILLE
Melville Holden
532~540 Canning Highway
P: (08) 9333 5333 Fax: (08) 9333 5300
MIDLAND
Goldy Holden
161 Great Eastern Highway
P: (08) 9274 8000 Fax: (08) 9274 6042
MORLEY
Metro Motors Holden
212 Walter Road West
P: (08) 9449 3522 Fax: (08) 9449 3596
OSBORNE PARK
North City Holden
Cnr Scarborough Beach Rd & Harborne St
P: (08) 9273 2222 Fax: (08) 9273 2220
PERTH
City Motors
505 Newcastle Street
P: (08) 9422 7777 Fax: (08) 9422 7630
ROCKINGHAM
Rockingham Holden
20 Smeaton Way
P: (08) 9550 9550 Fax: (08) 9550 9599
VICTORIA PARK
Youngs Holden
529 Albany Highway
P: (08) 9449 9449 Fax: (08) 9449 9494

AUSTRALIAN HOLDEN RETAILERS cont.

WANNEROO
Phoenix Holden
5 Berriman Drive
P: (08) 9409 9200 Fax: (08) 9309 2140

W.A. Country

ALBANY
Albany City Holden
92~98 Earl Street
P: (08) 9842 8000 Fax: (08) 9841 8623
BRIDGETOWN
Kordics Bridgetown
183 Hampton Street
P: (08) 9761 1377 Fax: (08) 9761 2151
BROOKTON
Coote Motors
1 Robinson Road
P: (08) 9642 1108 Fax: (08) 9642 1003
BROOME
Norwest Holden
7 McPherson Street
P: (08) 9192 1277 Fax: (08) 9193 5249
BUNBURY
Bunbury Holden
3 Sandridge Road
P: (08) 9791 3899 Fax: (08) 9791 2990
BUSSELTON
Fennessy's
4~8 Bussel Hwy
P: (08) 9752 1577 Fax: (08) 9752 4080
CARNAMAH
T & H Walton Stores Pty Ltd
Robertson Street
P: (08) 9951 1130 Fax: (08) 9951 1082
CARNARVON
North West Autos
229 Robinson Street
P: (08) 9941 1159 Fax: (08) 9941 1363
COLLIE
Station Motors
84 Throssell Street
P: (08) 9734 1855 Fax: (08) 9734 1913
ESPERANCE
Dempster Holden
Norseman Road
P: (08) 9071 1155 Fax: (08) 9071 3799
GERALDTON
Young Motors
34 Cathedral Avenue
P: (08) 9921 1088 Fax: (08) 9964 1157
HARVEY
Stockman Holden
111 Uduc Road
P: (08) 9729 3333 Fax: (08) 9729 1140
KALGOORLIE
Golden City Holden
114 Boulder Road
P: (08) 9021 1699 Fax: (08) 9021 5737
KARRATHA
Moxham Motors
Lot 4551 Balmoral Road
P: (08) 9144 1225 Fax: (08) 9144 1258
KATANNING
Edwards Holden
159 Clive Street
P: (08) 9821 2388 Fax: (08) 9821 2429
KELLERBERRIN
Dowding Motors
1 Mitchell Street
P: (08) 9045 4141 Fax: (08) 9045 4466
KUNUNURRA
Argyle Holden
Lot 231 Bloodwood Drive
P: (08) 9168 2236 Fax: (08) 9169 1124
MANDURAH
Mandurah Holden
53 Pinjarra Rd
P: (08) 9535 8777 Fax: (08) 9535 8822
MANJIMUP
Manjimup Automotive Services
Pritchard Street
P: (08) 9771 1388 Fax: (08) 9777 1214
MOORA
Frank Lewis Holden
92 Gardiner Street
P: (08) 9651 1408 Fax: (08) 9651 1724
NARROGIN
Edwards Motors
126 Federal Street
P: (08) 9881 5555 Fax: (08) 9881 5500
NORTHAM
Withnell Motors
58 Fitzgerald Street
P: (08) 9622 5073 Fax: (08) 9622 3664
PORT HEDLAND
Moxham Motors
15 Anderson Street
P:(08) 9173 3660 Fax: (08) 9144 1258
WAGIN
Edwards Motors
3 Ranford Street
P: (08) 9861 2666 Fax: (08) 9861 2622

AUSTRALIAN HOLDEN RETAILERS cont.

NEW ZEALAND HOLDEN RETAILERS

Auckland Metropolitan

GLENFIELD
Giltrap Holden
150 Wairau Road
P: (09) 444 8114 Fax: (09) 444 8008

HENDERSON
West City Holden
435 Great North Road
P: (09) 836 0097 Fax: (09) 836 6612

MANUKAU
Davie Motors Limited
58 Cavendish Drive
P: (09) 262 1012 Fax: (09) 262 1011

NEWMARKET
Schofield & Co. Limited
50 Great South Road
P: (09) 520 6369 Fax: (09) 524 1500

PANMURE
Moyes Motor Group Limited
500-510 Ellerslie/Panmure Highway
P: (09) 527 1200 Fax: (09) 527 8314

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ALEXANDRA
Currie Motors
65 Centennial Avenue
P: (03) 448 6989 Fax: (03) 448 9384

AMBERLEY
Arthur Burke Limited
Markham Street
P: (03) 314 8121 Fax: (03) 314 8281

ASHBURTON
Smallbone Brothers Limited
Cnr. Burnett & Cass Streets
P: (03) 307 9028 Fax: (03) 307 9212

BLENHEIM
Wadsco Motors Limited
55-59 Scott Street
P: (03) 578 5199 Fax: (03) 578 2572

CHRISTCHURCH
Blackwell Motors Limited
Cnr. Cashell/Madras Streets
P: (03) 379 5500 Fax: (03) 379 5666

DUNEDIN
Cooke Howlison Limited
484 Andersons Bay Road
P: (03) 456 0570 Fax: (03) 455 5668

DARGAVILLE
Marcel Motors Limited
34 Victoria Street
P: (09) 439 7399 Fax: (09) 439 7399

GISBORNE
Enterprise Cars (1992) Limited
323 Gladstone Street
P: (06) 867 8368 Fax: (06) 867 1280

GRACEFIELD
Cable Price (NZ) Ltd
3 Tunnel Grove
P: (04) 568 4289 Fax: (04) 568 9699

HAMILTON
Ebbett Waikato Limited
204-208 Anglesea Street
P: (07) 838 0949 Fax: (07) 838 3380

HASTINGS
Deakin Motors
Omahu Road
P: (06) 879 7176 Fax: (06) 879 7698

HASTINGS
Karamu Holden
Cnr. Karamu Road & Albert Street
P: (06) 876 6700 Fax: (06) 876 6664

HAWERA
Moller Johnson Motors (Hawera) Limited
39-49 Regent Street
P: (06) 278 7166 Fax: (06) 278 5054

INVERCARGILL
GWD-Russells Limited
18-24 Yarrow Street
P: (03) 218 2149 Fax: (03) 218 3309

KAIKOHE
Bay Motors Limited
Wihongi Street
P: (09) 401 1860 Fax: (09) 401 0883

KAITAIA
Jim Crene Motors Limited
Melba Street
P: (09) 408 1310 Fax: (09) 408 1311

LEVIN
Horowhenua Motor Co. Limited
1-11 Exeter Street
P: (06) 368 7169 Fax: (06) 368 8536

LOWER HUTT
Brendan Foot Motors Limited
16-20 Railway Avenue
P: (04) 587 0005 Fax: (04) 566 2311

MASTERTON
Wagg & Harcombe Limited
87-93 Dixon Street
P: (06) 377 5169 Fax: (06) 378 8840

MATAMATA
Matamata Motor Group Limited
2 Arawa Street
P: (07) 888 7059 Fax: (07) 888 5709

NEW ZEALAND HOLDEN RETAILERS cont.

MORRINSVILLE
Nicholson United Autos
328 Thames Street
P: (07) 889 7042 Fax: (07) 889 3529

MOUNT MAUNGANUI
Transport Commercial (Tauranga) 1997 Ltd
116 Hewletts Road
P: (07) 574 5393 Fax: (07) 575 0403

NAPIER
Karamu Holden
Cnr Wellesley Rd & Thakeray St
P: (06) 874 3033 Fax: (06) 834 1454

NELSON
Nelson Bays Holden
2 Selwyn Place
P: (03) 545 7222 Fax: (03) 545 6057

NEW PLYMOUTH
Auto City
86 Molesworth Street
P: (06) 758 0919 Fax: (06) 758 5330

OAMARU
North Otago Motor Group Limited
24-30 Severn Street
P: (03) 434 5099 Fax: (03) 434 9983

OTOROHANGA
Pat Prescott Limited
205 Maniapoto Street
P: (07) 873 7119 Fax: (07) 873 7156

PAEROA
Linn Motors Limited
10-12 Belmont Road
P: (07) 862 8715 Fax: (07) 862 8711

PAHIATUA
Jones Motors Limited
30-34 Main Street
P: (06) 376 7524 Fax: (06) 376 7192

PALMERSTON NORTH
Robertson Motors
200 Rangitikei Street
P: (06) 358 1062 Fax: (06) 359 0303

PARAPARAUMU
Guy Weaver's Auto Village
2-6 Ihakara Street
P: (04) 298 8089 Fax: (04) 298 7186

PUKEKOHE
Counties Motorcourt Limited
Cnr. Edinburgh & Tobin Streets
P: (09) 238 3259 Fax: (09) 238 3298

ROTORUA
Shorland Slater Limited
79 Old Taupo Road
P: (07) 348 3179 Fax: (07) 347 1503

STRATFORD
Ansford Johnson Limited
369 Broadway
P: (06) 765 6119 Fax: (06) 765 7410

TAUPO
Taupo Holden
50 Ruapehu Street
P: (07) 378 4130 Fax: (07) 378 0357

TAUMARANUI
Turaki Motors Limited
Hakiaha Street
P: (07) 895 7009 Fax: (07) 895 8909

TAURANGA
Ebbett Tauranga
Cnr. Wharf Street & Cameron Road
P: (07) 578 2843 Fax: (07) 578 6044

TE AROHA
Summit Motor Co. Limited
Kenrick Street
P: (07) 884 8174 Fax: (07) 884 8133

TE AWAMUTU
Rosetown Motors Limited
Cnr. Churchill & Mahoe Streets
P: (07) 871 5143 Fax: (07) 871 5045

TE PUKE
Bob Batchelor Motors Limited
Jellicoe Street
P: (07) 573 9781 Fax: (07) 573 6057

THAMES
Linn Motors
429 Pollen Street
P: (07) 868 9591 Fax: (07) 868 9595

TIMARU
Hervey Motors Limited
6 Sefton Street
P: (03) 684 7179 Fax: (03) 684 7176

UPPER HUTT
Twin Lakes Motor Company
769 Fergusson Drive
P: (04) 528 5609 Fax: (04) 527 8390

WANGANUI
Bob Burgess Motors Limited
1-5 Purnell Street
P: (06) 345 5588 Fax: (06) 345 5584

WELLINGTON
Williams & Adams
15-27 Abel Smith Street
P: (04) 801 6777 Fax: (04) 385 7437

WHAKATANE
Harts Limited
1 Bracken Street
P: (07) 308 6334 Fax: (07) 307 1536

NEW ZEALAND HOLDEN RETAILERS cont.

WHANGAREI
Mark Cromie Holden
5-13 Hannah Street
P: (09) 438 3199 Fax: (09) 438 3615

CHAPTER 10

Tow and load

Page

10-2 Towing
10-3 Towing equipment
10-4 Loading the vehicle
10-5 Towing your vehicle
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TOWING

Trailers

The word 'trailer' is used throughout this section and is intended to include all types of towed vehicles, such as a caravan, boat trailer or any other special purpose trailer.

Towing

Your vehicle is designed primarily as a passenger vehicle, so handling, durability and economy may be affected by towing a trailer.

Refer to the chart on the facing page to see which equipment is specified as essential and which equipment is recommended for the weight you are towing. Your Holden Retailer will help supply and install towing equipment to suit your requirements.

Your vehicle is fitted with a 1600 kg capacity tow bar as standard.

Overloading

Never exceed the loads given for the towing equipment fitted to your vehicle. For your safety and your vehicle's durability, all essential equipment must be fitted. Otherwise you may void your New Vehicle Warranty, to the extent that Holden considers the overloading or missing equipment to have affected the specifications or quality of your vehicle.

Carrying gas cylinders in vehicles

WARNING:

Gas cylinders can leak, creating a risk of fire or explosion. As a precaution, ensure adequate ventilation when carrying gas cylinders. They must be restrained from rolling around, and where possible, placed in the load area of the vehicle. It is recommended that if gas cylinders are frequently transported that a purpose-built carrying compartment be used. Transportation of gas cylinders is regulated by legislation in some states.

Driving speed

When towing up to 1600 kg the maximum driving speed is as per the state's law.

When towing between 1600 kg and 2100 kg the maximum driving speed must not exceed 80 km/h.

WARNING:

Holden towing equipment is recommended where it is available. Where it is not available, no recommendation is made as to the make of equipment which should be used. Holden will not accept liability for defects occurring in towing equipment not marketed by Holden or for defects in the vehicle arising from the use of such equipment or for loss or injury caused by use of such equipment. The use of such equipment may void your New Vehicle Warranty, to the extent that Holden considers the non-recommended equipment affects the specifications or quality of your Holden vehicle. It is inadvisable to mix and match different brands of towing equipment, as equipment is usually designed as an integrated package.

TOWING EQUIPMENT

TOW LOAD	ESSENTIAL EQUIPMENT	RECOMMENDED EQUIPMENT
Up to 1600 kg	Holden 1600 kg rated tow bar	A load distribution hitch is recommended if towing a single axle trailer
	Electric or hydraulic brakes on the trailer	
Between 1600 kg and 2100 kg	Holden 2100 kg rated tow bar	A load distribution hitch
	Electric or hydraulic brakes on the trailer	
	Superlift shock absorbers	

LOADING THE VEHICLE

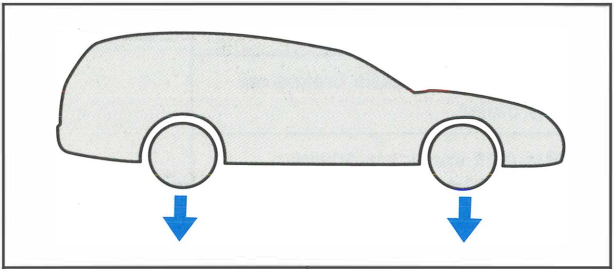
Overloading is a safety hazard and could also shorten the life of your vehicle. The recommended carrying capacity of your vehicle is, typically, as shown.

- **AWD WAGON** – five occupants plus 140 kg luggage and options (480 kg load in total).

However, do not exceed the maximum axle loads shown below in the diagram, including the weight of any options or accessories fitted to your vehicle.

If unsure, the vehicle should be weighed at a weighbridge. Remember that weight on a roof rack must be included in calculating the total load.

Maximum front and rear axle loads



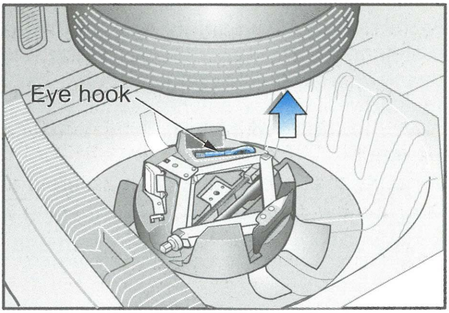
Rear axle load (kg)	Front axle load (kg)
1300	1180

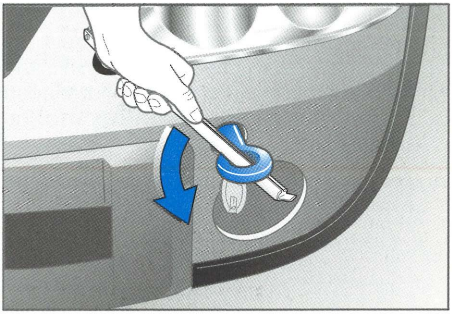
Notes on loading the vehicle

- Loads should not protrude above the upper edge of the rear seat backrests, or above the upper edge of the front seat backrests if the rear seat backrests are folded down.
- Heavy objects should be secured with lashing straps. If heavy loads slip when the vehicle is braked heavily or driven around a bend the handling of the vehicle may change.
- No object should be placed in front of the tail gate window or on the instrument panel. They are reflected in the glass, may obstruct the drivers view and could be thrown through the vehicle in the event of heavy braking or an accident causing injury.
- Bulky objects should not be transported with the tail gate open or ajar, or the tail gate window down, otherwise harmful exhaust fumes may enter the vehicle. Also, the rear number plate is not visible with the tail gate raised, which is illegal.
- Driving with a loaded roof rack increases the sensitivity of the vehicle to cross winds, and affects handling owing to the higher centre of gravity of the vehicle.
- No object should be placed in the area where the airbags inflate. The object could cause injury if the airbags are triggered.
- Heavy objects in the load compartment should be placed as far forward as possible against the rear seat backrests. If the rear seats are folded down, the objects should be placed against the front seat backrests. If objects are to be stacked, the heavier objects should be placed at the bottom.
- Overloading is a safety hazard and may also shorten the life of vehicle components.

TOWING YOUR VEHICLE

Proper lifting or towing equipment is necessary to prevent damage during any towing operation of the vehicle. State and local laws must be followed. In an emergency, your vehicle may be towed on all four wheels in the following manner:





1. Access the towing eye hook located with the jack and tools beneath the spare wheel in the rear compartment.
2. At the front of the vehicle on the passenger's side, open the cover concealing the hole for the towing eye hook. To open the cover, press the lower edge of the cover and then pull it outwards.
3. Screw the towing eye hook in anticlockwise as far as it will go, then use the wheel nut wrench to tighten it.

   Note: The towing eye hook is rated to a maximum load of 1500 kg.
4. Attach a tow rope to the eye hook. Do not attach a tow rope to the bumper bars, brackets or any other part of the vehicle.
5. Place the transmission in neutral and release the park brake.
6. Switch the ignition on. This releases the steering lock and allows the correct operation of windscreen wipers, horn and turn signals.
7. To prevent the entry of exhaust fumes from the towing vehicle into your vehicle, close the windows and select recirculate with the ventilation controls.

For safety and to prevent damage to the vehicle, avoid jerky movements and drive slowly during towing operations.

Note: Power assist for brakes and power steering is not available when the engine is not running and significantly more effort is required to brake and to steer.

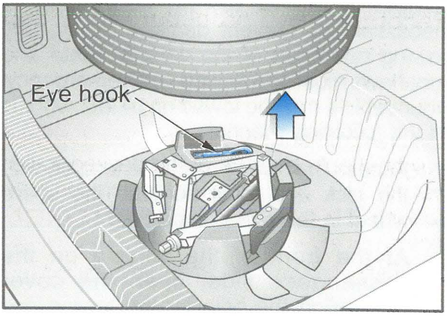
WARNING:

- Always carry a strong tow rope or snatch strap when travelling off road.
- Do not use a steel cable or a rigid link, i.e. steel bar, to tow the vehicle.
- Always stand well clear of the tow rope while the vehicle is being towed.
- Vehicles with automatic transmissions must not be towed for more than 55 km or at over 55 km/h unless both front and rear propeller shafts are removed.
- If the transmission is defective, your vehicle must not be towed unless both the front and rear propeller shafts are removed.
- Only the driver should remain in a towed vehicle for the duration of the trip.
- The vehicle must not be towed with either the front or rear wheels off the ground. If the vehicle must be towed with only the front wheels contacting the road, the front propshaft must be removed – regardless of speed or distance to be travelled. Failure to do so can result in serious damage to the transfer case. If it is not possible to tow the vehicle in this manner, then it must be transported on a special car transporter.

TOWING ANOTHER VEHICLE

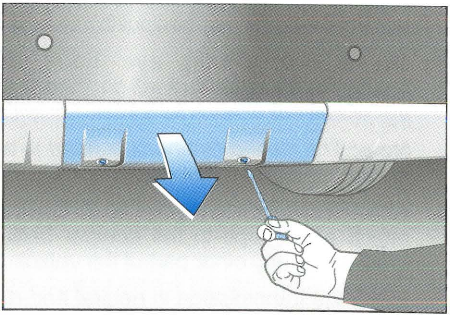
Proper lifting or towing equipment is necessary to prevent damage during any towing operation. State and local laws must be followed. In an emergency, a vehicle may be towed by your vehicle in the following manner:

1. Access the towing eye hook located with the jack and tools beneath the spare wheel in the rear compartment.



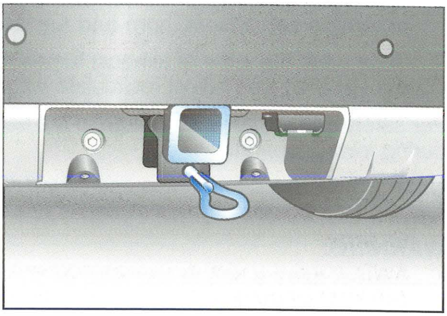
2. At the rear of the vehicle, unscrew the two quarter-turn fasteners located in the towbar cover plate with a flat-bladed screwdriver or coin. Then remove the cover plate.

   Note: The tow bar tongue must be removed to use this tow point.



3. Screw the towing eye hook in anticlockwise as far as it will go (as shown), then use the wheel nut wrench to tighten.

   Note: The towing eye hook is rated to a maximum load of 1500 kg.
4. Attach a tow rope to the eye hook. Do not attach the tow rope to the rear axle.
5. Drive off slowly and avoid jerky movements.



WARNING:

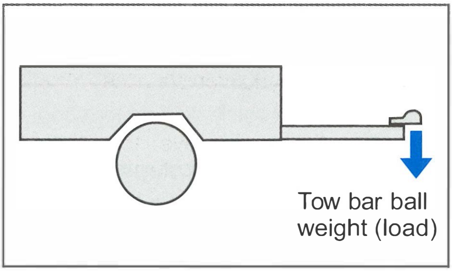
- Always carry a strong tow rope or snatch strap when travelling off road.
- Always stand well clear of the tow rope while the vehicle is being towed.
- Vehicles should only be towed facing forwards and must not be towed for more than 100 km or at over 80 km/h.
- Only the driver should remain in a towed vehicle for the duration of the trip.

ATTACHING A TRAILER

Recommended procedure for attaching a trailer

If a trailer is hitched to the vehicle it places a weight on the tow bar, this weight is called the 'tow bar ball weight' or 'tow ball load'.

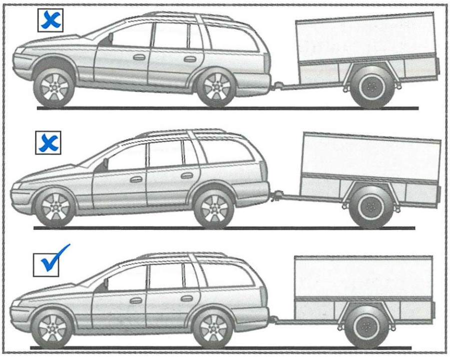
It is recommended that the tow bar ball weight should be 10% of the packed trailer weight. This can be adjusted by correctly packing the contents of the trailer, i.e. by moving items forwards or backwards within the trailer so as to change the balance of the trailer.



If the tow bar ball weight is too light or too heavy, the steering and handling of the vehicle will be affected.

All towing

1. Axle loads must not be exceeded when the tow bar ball weight is included (refer previously for maximum axle loads). If maximum axle loads are exceeded, sufficient weight should be removed from the rear of the vehicle and transferred onto the trailer.
2. Ensure the weight of the packed trailer is not greater than the towing capacity of your Holden approved tow bar package.
3. Connect the trailer to the vehicle.



When towing over 1200 kg

4. Adjust superlift shock absorbers, if fitted (refer to page 10-3 for requirement of superlift shock absorbers). Note that if towing at maximum trailer capacity, apply the maximum of 300 kPa pressure.
5. Adjust load distribution hitch so that the vehicle and trailer are level with the ground.

Example:

- AWD wagon loaded with five occupants (with an average weight of 68 kg each) and 140 kg of luggage and options in the rear load area. This is the maximum load allowable.
- Trailer then hitched up, weighing 1000 kg when loaded. The trailer has been correctly balanced so as to provide 10% of its weight on the tow bar. This translates to:

140 kg	(existing luggage and options)
+ 100 kg	(10% of trailer weight)
= 240 kg	loaded on the wagon

The AWD wagon is now overloaded at the rear.

- Therefore, move 120 kg of luggage into the trailer. This now translates to:

20 kg	(luggage and options)
+ 112 kg	(10% of the trailer, which now weighs 1120 kg)
= 132 kg	loaded on the wagon

The AWD wagon and trailer are now correctly loaded, as this weight is under 140 kg.

TOWING AND LOADING EQUIPMENT

Load distribution hitch

- A load distribution hitch is recommended when towing more than 750 kg.
- A load distribution hitch is designed to raise the rear of the vehicle and transfer a portion of the load to the front wheels when the loaded trailer is hitched.
- The loaded vehicle and trailer should be level, that is, parallel to the ground.

Booster springs and superlift shock absorbers (if fitted)

The use of booster springs or superlift shock absorbers DOES NOT increase the carrying capacity of the vehicle. Maximum loads for your vehicle must NOT be exceeded, otherwise overloading of axle parts may shorten the life of your vehicle.

However, superlift shock absorbers do allow adjustment of the vehicle's height, so that you have improved handling and better ground clearance in rough terrain when the vehicle is heavily loaded.

WARNING:

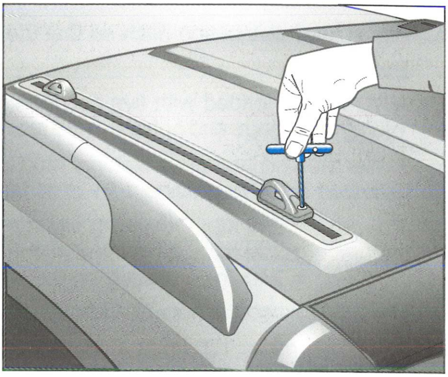
- Do not drive with superlift shock absorbers inflated when the vehicle is not loaded, as vehicle handling is affected. The vehicle should be at normal level.
- Always ensure that superlift air pressures are within the minimum and maximum pressures shown on the tag attached to the air pressure valve. When towing 2100 kg the superlift shock absorbers should be adjusted to 300 kPa.

Roof racks

Roof rack loads alter the handling of a vehicle, due to a change in the centre of gravity. When carrying loads on the roof rack, avoid abrupt swerving or sharp steering.

WARNING:

- The load, including the weight of the roof rack, must not exceed 80 kg and should be evenly distributed.
- For safety reasons and to avoid damaging the roof, only use the roof racks approved by Holden for your vehicle.



Tie-down anchors (if fitted): Depending on the luxury level of your vehicle, tie-down anchors may be provided. The tie-down anchors can be adjusted using a special key, provided in the glovebox of your new vehicle.

To adjust, loosen the screw on the anchor with the key at both ends. Move the anchor backwards or forwards as required, then tighten the screw with the key.

Note: Remember that weight of the roof load must be included when calculating the total load, refer to LOADING THE VEHICLE previously in this chapter.

WARNING:

- The maximum load for the tie-down anchor system is 25 kg single mass. That is, if an object weighs 25 kg, only one object can be held by the tie-down system.
- Do not use when there are visible signs of wear or damage.

TOWING PRECAUTIONS

- When heavily loading your vehicle or when towing, your tyres should be inflated to the maximum recommended pressure (refer to Chapter 7 for tyre placard location and information about tyre pressures). Also refer to Chapter 4, under 'Loading the vehicle' for driving information with increased loads.
- Ensure that a load distribution hitch is correctly distributing the ball load and that superlift shock absorbers (if fitted) are adjusted correctly, refer to page 10-7.
- Tighten the tow ball retaining nut to 175 Nm (Newton metres) and check the torque frequently.
- Your vehicle will handle differently when towing. It is a good idea to make a couple of short distance trips with the trailer before you set off on the long one.
- Have your trailer correctly maintained and serviced, with particular attention given to condition of brakes (refer further on in this chapter), tyres, suspension, wheel bearings, towing coupling and lighting.
- You should have an extended-arm mirror on both sides of your vehicle.
- Headlights may need re-aiming after the loaded trailer has been hitched, particularly if a load distribution hitch is not used.
- Use a lower gear, rather than your brakes, when descending steep hills.
- If your trailer moves off the road behind you, allow the left wheels of your vehicle to move off as well. When it is safe to do so, carefully steer back on to the road. A sudden attempt to steer back could make you swerve dangerously.
- To stop the transmission constantly changing between 3rd and 4th gear, it is recommended that the 'Power' mode be selected when towing. Refer to Chapter 4 for selection of 'Power' or 'Normal' modes.
- Do not use axle-mounted hitches. They can cause damage to the axle housing, wheel bearings, wheels and tyres.
- Ensure that the tow bar does not obscure the rear licence plate. If necessary, remove the tow bar tongue when it is not required for towing.
- If a tow bar is removed:

  Be certain to have any mounting holes in the underbody properly sealed to prevent the possible entry of exhaust fumes, dust and water.

  The Reverse Parking Aid (RPA) will require adjustment to allow for the tow bar removal, refer to Chapter 1 for adjustment details on the RPA.
- TRAILER BRAKES:

  Trailer brakes are recommended on trailers weighing 500 kg and over when loaded.

  The brakes on the trailer must be designed to cope with the braking requirements of that trailer under all towing conditions, without adversely affecting the brakes on the vehicle.

  Different types of brake signalling devices are available for trailers, such as electric, overrun or hydraulic signalling. If a hydraulic signalling type is used, it must not displace more than 0.21 cc of fluid during braking. It must not be fitted to the front brake system, only to the rear brake system. While no recommendation is made by Holden with regard to the manufacturer of the brake system, the specifications issued by PBR indicate that their unit meets Holden requirements.

TOWING PRECAUTIONS cont.

Running-in when towing

It is recommended that you drive your new vehicle for at least 1500 km before towing. If you must tow before this do not exceed 80 km/h. The same applies if you have a new or reconditioned engine, transmission or rear axle.

Vehicle maintenance

More frequent vehicle maintenance is required when using your vehicle to pull a trailer, refer to the service booklet in your vehicle's glovebox. For example, the transmission fluid should be changed every 12 months or 20 000 km.

Kerb weight

Kerb Mass (or kerb weight) is the mass of the vehicle in running order unoccupied and unladen with all fluid reservoirs filled to nominal capacity including fuel, and with all standard equipment.

AWD WAGON KERB WEIGHT

CX8 – 1940 kg.
LX8 – 1989 kg.

Note:

- The vehicle weights listed are estimates based on pre-production vehicles, and although correct at the time of printing, are subject to change. When the actual weight of a particular vehicle is needed, it is recommended that the vehicle be weighed on a suitable weigh-bridge.
- The recommended carrying capacity of your vehicle is five occupants plus 140 kg of luggage and options (480 kg in total). This total carrying capacity includes all options or accessories fitted to the vehicle, load on the roof rack and load on the tow bar ball if towing.

In all cases the maximum front and rear axle loads must not be exceeded. If in doubt the vehicle weight should be checked on a weighbridge. If the maximum axle weight is exceeded, re-distribute items in the vehicle as required.

CARGO BARRIER (if fitted)

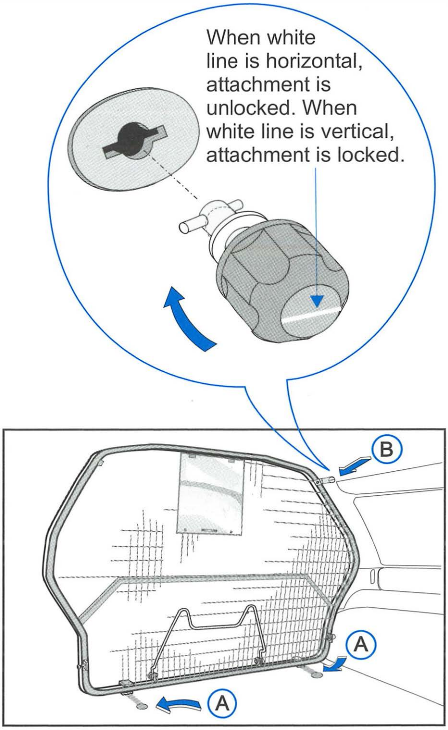
The AWD cargo barrier has been designed to fit at two positions. It can be fitted behind the rear seats when they are upright, or behind the front seats when the rear seat is folded down.

WARNING:

It is recommended that the load in the rear cargo area be anchored properly, even if the cargo barrier is in position.

Behind upright rear seat

1. For this position, the extension arms and folding centre leg are not required. Ensure that all are folded back and tied away securely.
2. With the cargo barrier's compliance plate facing to the rear, tilt the cargo barrier back and lift into the wagon load area.
3. Place the cargo barrier directly behind the rear seat.
4. Move the short bottom straps so that the screw aligns with the nut in the floor. Insert the screws into the holes 'A' in the floor and turn the screws clockwise to tighten.
5. Tilt the top of the cargo barrier up towards the roof and align the top attachments with roof rear attaching holes 'B'.
6. Push the attaching pins of the cargo barrier firmly into the roof and turn 90° to lock.
7. Ensure that all attachments, top and bottom, are firmly secured.



When white line is horizontal, attachment is unlocked. When white line is vertical, attachment is locked.

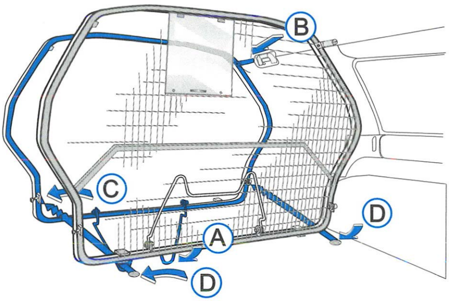
Note: When moving or removing the cargo barrier, reverse this fitting procedure.

CARGO BARRIER (if fitted) cont.

Behind front seats – with rear seat folded

WARNING:

It is recommended that the load in the rear cargo area be anchored properly, even if the cargo barrier is in position.



1. Remove rear head restraints and fold down the rear seat, refer to Chapter 3.
2. Remove the restraining tie from the centre leg of the cargo barrier. Slide the plastic sleeves on the long straps outwards to release the long straps, then rotate the centre leg of the cargo barrier down to the floor. Resecure the long straps with the plastic sleeves.
3. Rotate the centre leg to the vertical, 'down' position 'A'.
4. With the cargo barrier's compliance plate facing to the rear, tilt the cargo barrier back and lift into the wagon load area.
5. Lift the cargo barrier behind the front seats, with the centre leg resting on top of the transmission tunnel (position 'A').
6. Tilt the top of the cargo barrier up towards the roof and align the top attachments with roof front mounting locations 'B'.
7. Push the attaching pins of the cargo barrier firmly into the roof and turn 90° to lock into position, refer to the illustration on the previous page.
8. Slide the plastic sleeves outwards to release the long straps and pivot the long straps rearward (position 'C') so that the screw aligns with the nut in the rear floor. Insert the screws (position 'D') and turn the screws clockwise to tighten.
9. Ensure that all attachments are secured firmly.

Note: When moving or removing the cargo barrier, reverse this fitting procedure.

CARGO BARRIER (if fitted) cont.

Carrying heavy loads in the rear cargo area

When carrying heavy loads Holden recommends fitting a genuine Holden cargo barrier, designed to reduce cargo impact to passengers in an accident.

WARNING:

1. Place loads directly against the cargo barrier.
2. If involved in an accident or accidentally damaged, the cargo barrier should be replaced and the anchorages inspected by an authorised Holden Retailer.
3. Adult passengers should not ride in the cargo area and children should only ride in the cargo area when restrained in a Holden accessory seat. The cargo barrier must be removed when children are riding in a Holden accessory seat.
4. Remember that the tailgate cannot be opened from inside the cargo barrier area. Never leave children in the cargo area unattended if a cargo barrier is fitted.
5. Take care when placing loads behind the cargo barrier so as to prevent damage to child restraint anchorages and seat belt webbing in an accident.
6. In an accident, cargo may cause the cargo barrier to deform towards passengers.
7. The plaque must not be removed from the cargo barrier.
8. Clean the cargo barrier only with mild soap and water. Do not use solvents or chemicals. Discard the cargo barrier if it becomes rusted. Do not expose to direct sunlight.
9. Do not obstruct seat belts or child restraints, or their operation.
10. Seat, seat belts or child restraint anchorages must not be used to secure the cargo barrier.
11. Long thin items of cargo should be placed length ways across the vehicle to minimize the risk of penetration through the cargo barrier.
12. Do not attach (drill, rivet, stick etc.) objects to the front or rear of the cargo barrier.
13. The maximum load for a genuine Holden cargo barrier is 60 kg single mass. That is, if an object weighs 60 kg, only one object is permitted behind the cargo barrier.
14. Ensure that the window locates over the pins when closed.
15. Window must not be left opened.
16. Replace the poly window if it becomes hazy.
17. Do not use this cargo barrier in any other vehicle for which it is not designed.

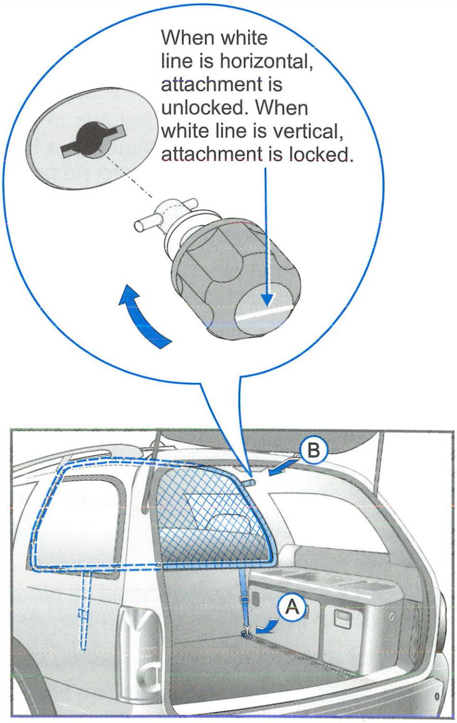
VERTICAL CONVENIENCE NET (if fitted)

The AWD vertical convenience net has been designed to fit behind the rear seats to help contain light objects stored in the rear cargo area.

Fitting vertical convenience net

1. Unroll the vertical convenience net.
2. Place the vertical convenience net directly behind the rear seat.
3. Tilt the top of the vertical convenience net up towards the roof and align the top attachments with roof rear attaching holes 'B'.
4. Push the attaching pins of the vertical convenience net firmly into the roof and turn 90° to lock.

   Note: Ensure that the net is centrally located along the top mounting bar.
5. Insert two of the adjustable tie-down anchors (found in the right-hand rear compartment) into the tie-down rails.
6. Pull up each anchor lock and at the same time slide the anchor along the rails to the back of the rear seats.
7. Using the tension straps at the bottom of the vertical convenience net, attach the tie-down locks to the tie-down anchors ‘A’. Make sure they are secure by testing each corner with a quick tug.
8. Tighten the tension straps to make sure the net is taught and will not sag.
9. Ensure that all attachments, top and bottom, are firmly secured.


When white line is horizontal, attachment is unlocked. When white line is vertical, attachment is locked.
B
A

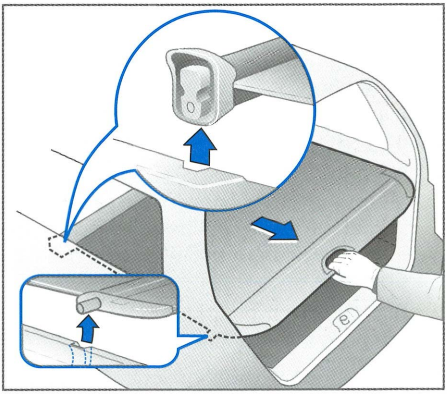
Note: When removing the vertical convenience net, reverse this fitting procedure.

WARNING:

- Avoid eye injury. Do not overstretch. Always keep face and body out of recoil path. Do not use when there are visible signs of wear or damage.
- The maximum load for the convenience net is 15 kg single mass. That is, if an object weighs 15 kg, only one object can be held by the convenience net.
- The load in the rear cargo area must be anchored properly, even if the vertical convenience net is in position. The only purpose of the net is to prevent light objects from being thrown about during heavy braking or in the event of a collision.

CARGO BLIND (if fitted)

The cargo blind is located in the rear compartment of the wagon. When the blind is required, it can be extended to provide protection from the sun and added security for goods stored in the back of the wagon.



To extend the cargo blind:

1. Grip the handle in the centre of the blind and pull it towards you.
2. Hook the tabs on either side of the blind into the slots provided in the rear trim panels and release the handle.

When the blind is not required, it can be retracted or removed altogether.

To retract the cargo blind:

1. Grip the handle in the centre of the blind and pull it gently towards you while lifting it out of the trim slots.
2. Gently let the blind retract back into its housing while holding the handle.
3. Release the handle once the blind has fully retracted.

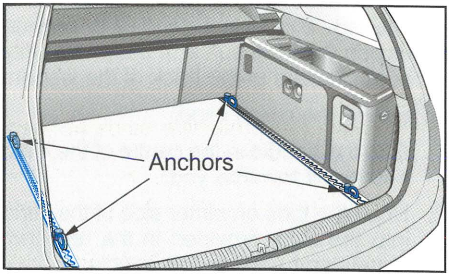
To remove the cargo blind:

1. Retract the cargo blind.
2. Unclip the cargo blind housing from the tab slots on either side of the rear trim panels by lifting the ends of the blind vertically.
3. Remove the blind from the vehicle and store it in a safe place.

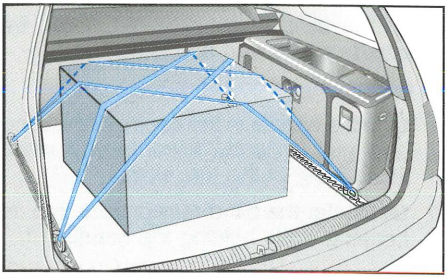
TIE-DOWNS

Recommended procedure for using tie-downs

When carrying heavy loads in the cargo area, Holden recommends using the tie-down system. It is designed to hold your load in place and reduce load impact to passengers in an accident.



Tie-down anchor locations



Anchoring straps for heavy loads

1. Remove the protective strips (if fitted) along the two tie-down rails running the length of the rear cargo area. Lift the back edge and pull the strip straight upwards.
2. Insert the four adjustable tie-down anchors into the tie-down rails.
3. Pull up each anchor lock and at the same time slide the anchor along the rails to the desired position. Make sure they are secure by testing each anchor with a quick tug.

   Use the anchoring straps to secure your load.
4. Place your load centrally between the rails and as far forward in the cargo area as is possible.
5. Tie down the load with the anchoring straps. Use the method shown in the illustration on this page to ensure the load is properly secured.
6. Feed each Holden approved strap (accessory) through a maximum of 2 tie-down loops.
7. Feed the end of each strap through the back of the split in the ratchet pin.
8. Remove the slack in the strap by pulling the strap through by hand and then tighten using the ratchet.
9. Ensure the load is held tight and secure. Check for loose items that may not be properly tied down.

When not in use, the anchoring straps are stored in the storage compartment on the side of the rear cargo area. The protective strips (if fitted) should be in place.

Note: When removing the anchoring straps, reverse this fitting procedure.

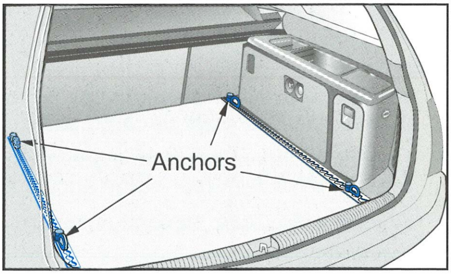
WARNING:

- The maximum load for the tie-down system is 80 kg single mass when used in conjunction with the Holden approved straps. That is, if an object weighs 80 kg, only one object can be held by the tie-down system.
- Do not use when there are visible signs of wear or damage.

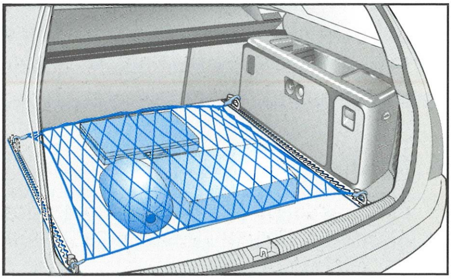
CONVENIENCE NET

Recommended procedure for using wagon convenience net

When carrying light loads in the cargo area, Holden recommends using the wagon convenience net. It is designed to keep light objects in the load area tidy, not for anchoring.



Tie-down anchor locations



Cargo net for light loads

1. Remove the protective strips (if fitted) along the two tie-down rails running the length of the rear cargo area. Lift the back edge and pull the strip straight upwards.
2. Insert the four adjustable tie-down anchors (found in the right-hand rear compartment) into the tie-down rails.
3. Pull up each anchor lock and at the same time slide the anchor along the rails to the desired position.

   Use the convenience net to secure your load.

   On each corner of the convenience net are tie-down locks which are mounted to the tie-down anchors.
4. Unroll the convenience net. Attach the tie-down locks to the tie-down anchors on one side of the cargo area. Make sure they are secure by testing each corner with a quick tug.
5. Place your load in the middle of the cargo area.
6. Pull the convenience net over your load.
7. Attach the remaining two tie-down locks to the tie-down anchors on the other side of the cargo area. Make sure they are secure by testing each corner with a quick tug.
8. Ensure the load is held tight and secure. Check for loose items that may not be properly tied down. The tie-down anchors should be placed as far forward and as far back as possible on the rails.

When not in use, the convenience net is stored in the storage compartment on the side of the rear cargo area. The protective strips (if fitted) should be in place.

Note: When removing the convenience net, reverse this fitting procedure.

WARNING:

- Avoid eye injury. Do not overstretch. Always keep face and body out of recoil path. Do not use when there are visible signs of wear or damage.
- The maximum load for the convenience net is 15 kg single mass. That is, if an object weighs 15 kg, only one object can be held by the convenience net.
- Never use the convenience net when the rear seat is folded down. These nets are only intended to keep light objects tidy, not for the anchoring of loads.
- Improve the protection by fastening the outer seat belts. Check that the two red warning-indication flags are fully down. This shows that the backrests are locked.

LOAD ANCHORING WARNINGS

Carrying heavy loads in the rear cargo area

The following warnings apply whenever carrying heavy loads using either the wagon tie-downs or convenience net.

WARNING:

- Place loads as low down and as far forward in the cargo area as possible. That is, against the back seat or cargo barrier (if fitted).
- Load size should never be higher than the back seats if a cargo barrier is not being used. The driver's rear-vision should never be impaired by the load.
- Always make sure the load is secure and will not move during heavy braking or a collision.
- Unsecured loads increase the risk of injury during heavy braking, sudden avoidance manoeuvres or a collision.
- Use only the Holden recommended and approved tie-down straps and convenience net to secure your loads. Do not use elasticised straps.
- Never attach more than one tie-down strap to any single tie-down anchor.
- Protect the tie-downs and convenience net from sharp edges of the load. Replace them if they begin to wear.
- Make sure the back seat is locked in the upright position whenever carrying heavy loads. This is a basic requirement for protection against load displacement in the event of sudden braking or a collision. The rear seat in the upright position provides greater protection against load displacement.
- The driving characteristics of your vehicle can be affected because the centre of gravity is altered when there is a load in the cargo area. Match your speed and driving style according to how the vehicle is loaded.
- Make sure you do not exceed the rear axle load discussed previously in this chapter.

CHAPTER 11

Cleaning

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11-8 Cleaning products

INTERIOR CLEANING

WARNING:

Many cleaners may be toxic, flammable or may damage the interior. When cleaning the interior, avoid volatile cleaners such as: acetone, lacquer thinners, enamel reducers, nail polish removers, or cleaners such as laundry soaps, bleaches or reducing agents. Never use carbon tetrachloride, petrol or naphtha for any cleaning purpose. Be sure the vehicle is well ventilated while using any cleaners and always follow the cleaning product manufacturer's recommendations. Water based cleaners, rather than solvent based cleaners, are recommended.

Steam cleaning of seats is not recommended.

Care and cleaning of upholstery

Dust and dirt which accumulate on upholstery should be removed every few weeks – more often with constant driving. This can be done readily with a vacuum cleaner. Before attempting to remove spots and stains, it is necessary to determine as accurately as possible:

- The type of fabric.
- The nature and age of the stain.
- The effect of the stain removal agent on the upholstery.

Remove the stains as soon as possible after they have been made. If they are allowed to remain for any length of time they very often become oxidised or set, and removal becomes very difficult, if not impossible.

Velour door trim

Marks on the velour fabric, which extends to the bottom of the door, can be cleaned off using mild, soapy water on a clean cloth, rubbed in the direction of the pile. When dry, a soft brush may be used to smooth the pile.

Vinyl

Vinyl fabrics are used for seating, headlinings and auxiliary trimming. The surface should be wiped over with a dry cloth during the regular cleaning of the vehicle.

Should dirt accumulate and become embedded in the material pattern:

1. Use luke warm water and soap, or a good quality velour fabric and vinyl cleaner, to work up thick suds on a piece of cheesecloth and apply to the surface. A soft bristle brush can be used to remove embedded dirt and stubborn stains.
2. Repeat using only a damp cloth and no soap.
3. Wipe dry with a soft cloth. The above cleaning instructions also apply to the rubber floor mats.

Cloth

- Most loose dirt and dust can be removed by a vacuum cleaner or soft brush.
- DO NOT use a whisk broom or a coarse hair brush.
- For normal soiling, sponge lightly with warm water containing a mild detergent. The fabric should then be rubbed lightly, and if necessary, sponged again to remove anything stubborn. Soak up excess fluid with a dry cloth. A good quality velour fabric and vinyl cleaner may be used, but should be used sparingly.

INTERIOR CLEANING cont.

Carpet

Thoroughly brush or vacuum the carpet. In many instances the carpet may require no further cleaning. If the carpet is extremely soiled, thoroughly vacuum it to remove loose dirt then, using a good quality velour fabric and vinyl cleaner, clean a small area at a time. After each area is cleaned, remove as much of the cleaner as possible with a vacuum cleaner.

Secured carpet mats (if fitted)

Retainers are provided to hold carpet mats in place. Use a screwdriver or similar (not the car key) to undo the retainers when required. To replace, push the retainer on the back of the mat into the hole in the carpet and turn clockwise to secure.

Leather (if fitted)

To remove surface soil and dirt from leather, clean regularly using a leather revitaliser. Apply using a lint free cloth and rub onto leather, do not saturate the leather with the cleaner and do not pour it directly onto the leather. Allow the leather to dry naturally. A mild detergent may be used as an alternative to a leather revitaliser.

For deeply embedded soil and dirt use a leather cleaner, this should be applied using the same process as leather revitaliser. After using a leather cleaner / revitaliser apply a leather protector. A leather protector is designed to repell dirt and provides water resistance.

Note:

- Leather should be cleaned and protected at least twice a year.
- Do not use synthetic cloths or brushes for cleaning the leather as this may damage the leather.
- Solvents may damage and / or discolour the leather and should not be used.
- The leather may shrink and harden if exposed to direct sunlight for extended periods. If possible park in the shade or cover the leather.
- Do not leave items on the leather that may melt and stick to leather, for example, plastic bags.

Seat belts

Clean seat belts only with a mild, non-abrasive soap and luke warm water. After washing, be sure to thoroughly sponge the washing solution out of the belts.

WARNING:

Do not bleach or dye seat belts as this may severely weaken them.

Interior glass

The interior glass area of the vehicle should be cleaned using Holden Glass Cleaner with a clean soft cloth. Care must be taken when cleaning inside the tailgate window so as not to damage the rear window demister.

Never use abrasive cleaners on any vehicle glass, as they can cause scratches.

EXTERIOR CLEANING

Caring for paint

To help preserve that shiny new vehicle finish, special attention should be given to correctly treating those conditions that can damage the paint.

Road bloom: If, over a long period of time, oils, dirt, exhaust and other pollutants are allowed to build up, they may combine to affect the paint finish.

Etching: Tree sap, bird droppings, salt water and other natural deposits can, if allowed to stay on the paint, leave an etching or scarring.

Pitting: Tar spots and some industrial fallout can react chemically and may cause pitting to the surface of the paint.

Paint inspection

Regular inspection of the vehicle should be made for scratch marks, cracks or damaged areas, all of which could develop rust. Any deep scratches, cracks or breakdown in the finish should be repaired without delay. Care should be taken to ensure that any rusting is counteracted immediately, otherwise rust 'creep' will extend beyond the damaged area, particularly in tropical or coastal areas, where the moist, or salt-laden air accelerates rusting. The paint finish of the vehicle gives a very high degree of protection against the weather, but it should be realised that wear and deterioration occur when the vehicle is exposed to elements for prolonged periods. The vehicle therefore should be garaged whenever possible.

To prevent damage of the paint surface, foreign matter should always be removed as soon as possible.

Note: Due to the acidity, it is recommended that foreign matter such as bird droppings be removed within 24 hours.

The way the paint keeps its condition over time can be assisted by you. The easiest way to keep that paint looking bright and shiny is to keep it clean. A wash once a week will do wonders. However, it must be done correctly.

Washing your vehicle

1. Never use an automatic wash that has anything that touches the paint other than water.
2. Wash your vehicle once a week to remove any build up of road grime that may have been deposited on your paint.
3. Find a cool, shady spot to wash it. Never wash it in direct sunlight.
4. Hose the vehicle down from top to bottom with plenty of cold water. This removes any grit or other loose particles and substances. Do not use a sponge or cloth yet.
5. Fill a bucket with luke warm water and add no more than 2 capfuls of gentle detergent, such as Holden Hi Suds Car Wash. Do not use hot water, strong soap or chemical detergents.
6. To remove bird droppings, soak with a wet sponge for several minutes before washing off. If still persistent, use a solution of 1 litre of water and 110 grams of dissolved baking soda (Bicarbonate of Soda). Flush the washed parts with clean water.
7. Starting with the roof, use a clean sponge to clean a small section at a time. Do not allow liquid to dry before rinsing off that section with clean water. When you have completed all sections, rinse the whole vehicle again with cold water.
8. Dry the clean vehicle thoroughly with a good quality chamois.

EXTERIOR CLEANING cont.

WARNING:
Care should be taken when moving the vehicle after washing, in case water has affected the brakes. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with a clear area ahead, until brake performance returns to normal.

Removing stains (grease, oil and tar spots)

Just washing your vehicle regularly means that most of the harmful substances deposited on the paint will be removed before they can cause permanent damage. However, some substances are not easy to remove. So if you notice stains on the paint, make sure that you remove them at the earliest possible opportunity.

Grease and oil, and even tar if it's fresh, can be removed from the paint with a little kerosene or turpentine. As a precaution against staining, wash and polish the area as soon as possible after the stain has been removed.

A rubbing or cutting compound can be used after a normal wash. But this should never be done on a regular basis because it removes paint.

WARNING:

- Some chemical cleaners used for removing road oils and tars from painted surfaces have been found to be detrimental to automotive paint.
- If petrol is spilt on the paint when refilling, flush off immediately with clean water, as petrol has a tendency to stain or soften new paint finish during the weathering out period, particularly when the vehicle is exposed to high temperatures.
- Petrol MUST NOT be used to clean any painted or plastic surfaces.

Air intakes

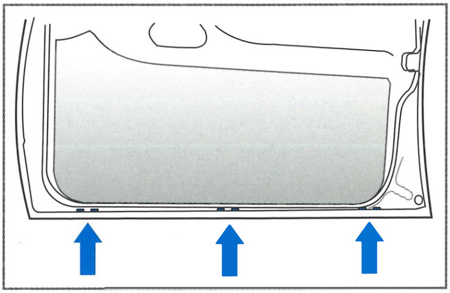
The intake area between the bonnet and windscreen may collect leaves, which will impair air flow into the vehicle. Also, the air intake area below the front bumper may collect leaves and road grime, which will impair engine cooling. It is recommended that these areas be cleared of debris whenever you wash your vehicle.

Under vehicle washing

The effects of salt etc. from road surfaces can cause rust under the vehicle. The underbody should be hosed with plain water whenever the vehicle is being washed. In geographical areas having a heavy concentration of corrosive materials (such as by the sea) it is recommended that the complete underbody be inspected and washed at least once each year, preferably after a winter's exposure. Particular attention should be given to cleaning out the underbody where dirt and other foreign materials may have collected.

Door drain holes

It is important that the drain holes at the bottom of the door panels are checked to make sure that they are free of dirt and other foreign materials which could trap water inside the panels. Clogged drain holes can be cleaned with a small screwdriver and these drain holes are angled towards the rear of the vehicle.



EXTERIOR CLEANING cont.

Polishing

Under normal circumstances the paint does not need polishing to retain its shine. A weekly wash is sufficient. However, the use of a good quality Polymer Glaze, such as Holden Quick and Easy Speed Finish, about every 3 months will reduce the effects of road bloom by removing natural contaminants which can build up on the paint.

Note: Do not attempt to apply a polish without first washing the vehicle to remove loose grit, surface dirt, dust or grease etc.

Tyres

Sponging with cold water is all that is necessary for normal cleaning. Oil and grease should be removed with soap and water or detergent. For tar or other substances, a mild abrasive, such as mechanic's hand soap or kitchen cleaning powder, may be used if necessary. Thoroughly wash the tyres with water to finish. Petrol must not be used for cleaning tyres.

New tyre look can be restored using a good quality tyre and bumper shine.

Alloy wheels

To preserve the original appearance of alloy wheels, keep them clean and free from build up of road dirt. A good quality wheel cleaner can be used for cleaning alloy wheels. Do not use abrasive cleaners on alloy wheels.

EXTERIOR CLEANING cont.

Glass cleaning – general

Special care should be taken to avoid scratching the glass. If it is cleaned at the same time as the rest of the vehicle, there is a possibility that particles of grit will cause fine scratches. Flush off any mud on the glass when washing the body, but leave the final cleaning and polishing until afterwards. Use Holden Glass Cleaner and wash each section of glass in turn, making sure that the water, its container and the sponge are quite clean and free from grit. Clean old linen cloth is better than new material for polishing glass.

Windscreen

It is important that the windscreen be kept clean so that the wiper blades may be as effective as possible. Old wiper blades can cause windscreen scratching and so should be regularly inspected and replaced.

Abrasive cleaners should never be used to clean glass as they can cause scratches, impairing night vision. After the windscreen has been cleaned with a wet sponge it should be wiped over with a soft, lint free cloth or chamois.

It is recommended that Holden Optikleen windscreen washer additive be added to the windscreen washer reservoir.

Wiper blades

Oil and road scum thrown up on the windscreen will cause smearing when the wipers are switched on and is transferred onto the wiper blades. Many owners, whilst they methodically clean the windscreen glass, omit to clean the wiper blades and consequently smearing of the glass reappears immediately the wiper blades are used. The blades can be cleaned by lifting them off the windscreen and cleaning with Holden Optikleen and a clean cloth.

Note: Do not operate the wiper blades by hand as this may damage the wiper drive mechanism.

If the wiper blades are used to clean dust and dirt from the windscreen in dry conditions always use the washer system first to wet the windscreen. Ensure that the windscreen washer reservoir is not empty.

Should the wiper blades be frozen to the windscreen, they must be lifted off and freed by hand before switching on the wipers.

CLEANING PRODUCTS

PART NUMBER	SIZE	DESCRIPTION	USAGE
92145132	237 ml	Quick and Easy Speed Finish	Seals in a deep, lustrous glazed finish. Long life protection from oxidation, salt and weather damage.
92145418	437 ml	Quick and Easy Speed Finish	Seals in a deep, lustrous glazed finish. Long life protection from oxidation, salt and weather damage.
92145130	237 ml	All Purpose Cleaner	Cleans and deodorises velour, most vinyl upholstery, hood linings, mats and carpets, etc.
92145416	437 ml	All Purpose Cleaner	Cleans and deodorises velour, most vinyl upholstery, hood linings, mats and carpets, etc.
92145133	237 ml	Glass Cleaner	Cleans all glass surfaces.
92145419	437 ml	Glass Cleaner	Cleans all glass surfaces.
92140005	500 ml	Optikleen	Windscreen washer solvent.
92140004	5 ml	Optikleen Sachet	Windscreen washer solvent; 1 sachett per washer bottle refill.
92145129	237 ml	Hi Suds Car Wash	Cleans vehicle exterior.
92145415	437 ml	Hi Suds Car Wash	Cleans vehicle exterior.
92145131	237 ml	Vinyl and Trim Dressing	Seals and protects vinyl upholstery and plastic trim.
92145417	437 ml	Vinyl and Trim Dressing	Seals and protects vinyl upholstery and plastic trim.
92145140	120 ml	Leather Revitaliser	Revitalises the leather upholstery.
92145141	120 ml	Leather Cleaner	Cleans the leather upholstery.
92145142	120 ml	Leather Protector	Protects the leather upholstery.
92145143	1 Kit	Leather Care Kit	Contains leather revitaliser, cleaner and protector.
92145135		Chamois	Cloth for wiping off excess water from the vehicle's exterior after washing and rinsing.
92145134		Handle Grip Sponge	Sponge for washing the vehicle.
92145136		Microfibre Glass Cleaning Cloth	Cloth for cleaning all glass surfaces.
92145137		Microfibre General Purpose Cleaning / Polishing Cloth	Cloth for general purpose cleaning / polishing.

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